THE AMERICAN NEPTUNE

A QUARTERLY JOURNAL OF MARITIME HISTORY

1957
OCTOBER

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THE AMERICAN NEPTUNE

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WHILE *my colleagues were slaving away this summer getting the July* NEPTUNE *in order and through the press, I was selfishly having, among other experiences, a most enjoyable lesson in modern maritime history.*

I sailed from New York on 10 *July, on the United States Lines C-2 freighter* Pioneer Reef, *for the South Seas with my family, and Stephen Phillips, one of our Museum Trustees. The voyage via the Gulf ports of Lake Charles, Louisiana; Beaumont and Houston, Texas; and Baton Rouge and New Orleans, was of a month's duration and gave an opportunity to observe leisurely modern life at sea, cargo handling, navigation, etc.*

I was particularly impressed with the high quality and obvious competence of the officers of the ship. The American merchant marine, regardless of some of its economic difficulties, is still producing a breed of men that can easily uphold the traditions of the past and are the equal of any seamen anywhere in the world.

One of the most fascinating aspects of the trip was the loading and unloading of the most diverse cargo. I did not realize before that freighters carried oil as cargo until several varieties were taken aboard in the Gulf ports. There were also drums of asphalt from the great tar lake in Trinidad going to Australia, lead from Australia unloaded in Houston, iron bars, coal-mining railway cars, tractors, cotton, cases of foodstuff and supplies for the islands, and boxes and crates of all shapes and sizes.

The skill and ingenuity required to stow all of this diverse cargo, some of which is always being unloaded and some coming aboard at every port, is incredible and a fascinating sight. The most impressive thing of all was the realization of the vast quantity of cargo moving by ship today.

In 1952 THE AMERICAN NEPTUNE *was forced, by rising production costs, to increase its annual subscription rate from* $5.00 *to* $6.50 *a volume, and the price of single numbers from* $1.25 *to* $1.75. *This increase, together with two generous grants from the Colonial Society of Massachusetts, carried us along until now.*

Since the subscription rate was increased there have been several raises in printing costs and we are once more faced with a financial squeeze, a familiar story today with all kinds of nonprofit journals. We hope it will not be necessary to raise subscription prices again. Can any of our members suggest means of securing additional advertising?

As has been the situation since the founding of NEPTUNE *all of the editorial work and subscription business is done by staff members of the Peabody Museum, either on museum time or evenings and week ends. Without the home at the Museum the journal could not be published at all and there are busy periods when getting out four numbers a year is a wearying chore. Fortunately our subscribers are understanding and sympathetic and do not seem to mind much when a number reaches them a month or six weeks late.*

In bringing Volume VII to a close I wish to express my deep appreciation to our editor, M. V. Brewington, and Assistant Treasurer Priscilla W. Papin, who saw the July NEPTUNE *through the press and to another of our editors, Alexander Crosby Brown, for writing the editorial for that number. My thanks also go to Robert G. Albion for continuing his exhaustive bibliographies, and to Charles H. P. Copeland for once more compiling the index for this volume.*

ERNEST S. DODGE

Peabody Museum of Salem

Four from Bristol

BY MARCUS W. PRICE

THE seductive call to high adventure and prodigious profits that lured so many ships and sailors from the Mersey and the Clyde to the blockaded Confederate ports during the War Between the States appears to have been inaudible to all save a few receptive ears in the British port of Bristol. From the beginning of the war until hostilities ceased, just four steamers are known to have cleared from that port to test the Yankee blockade. Of them, only one survived the twin hazards of war and the sea and safely found her way home again. And she, according to her master, Captain Page, was 'one of the most unfortunate of the fortunate blockade runners. While gaining her end of ultimately running the blockade, she only once got in without first running a very narrow escape.'[1]

Calypso was the first to enter the risky business.

Zebina Eastman, whose name smacks of Yankee clipper ships, bellied sails and flying spray, was the United States consul at Bristol in 1862, when, on 10 December, she slipped out of the harbor and headed for the open sea. Like his confreres at the other British ports, he kept a vigilant watch on doings at the docks. *Calypso* came to his attention, and as soon as he became convinced she was being fitted out to run the blockade he notified United States Secretary of State Seward and furnished him with the following description of the vessel:[2]

> Screw, iron steamer—about 200 feet overall in length, about 30 feet beam. Register probably 500 tons,—will carry 800. Fore and aft wooden fenders belted to her sides, about 50 feet long. A cabin house on deck—the top of the house forming the quarter deck, about 6½ feet high. Steering wheel foreside of the mizzen, on top of the same house, or quarter deck. Funnel or smoke pipe all black, with a good rake aft. Forecastle on deck, top of which forming [*sic*] poop deck fore head, with iron

[1] Article on the career of the steamer, *Old Dominion*, clipped from an undesignated Bristol newspaper and forwarded to U. S. Secretary of State Seward by Zebina Eastman, U. S. Consul at Bristol, with his Despatch No. 111, dated 13 April 1865.

[2] Despatch No. 39, dated 4 December 1862.

capstan on forecastle deck. Small figurehead. When loaded sets down at the stern. She has three masts, fore and aft rigged. The color of the ship black—the cabin companion, foreside of steering wheel on quarter, grained with oak. Carries four boats which are now white. Round ventilators or bull's eyes in the sides abaft the after gangway, about eight or ten inches in diameter. Captain's bridge foreside of the funnel.

He added that she was 'well loaded down' with cases, boxes, and bales believed to contain arms and other contraband.

Calypso had high bulwarks and was reputed to be able to attain a speed of eighteen to twenty knots an hour.[3] Her crew consisted of six able seamen, 'with a sufficient corps of engineers, firemen, and officers, in all about 25 persons.'[4] They had been promised a bonus of twenty pounds each if they made a successful voyage and were faithful to the interests of the ship.[4]

It had been very difficult to get a satisfactory crew. The 'two sets first engaged,' according to Eastman, had refused to sign on for the voyage.[4] Those who did soon were to have an opportunity to regret their temerity.

Touching at Madeira en route to Nassau, New Providence, *Calypso* found a Yankee warship, U.S.S. *Tuscarora,* lying at anchor in the harbor. This contretemps was not to have been expected. The Federal vessel watched *Calypso* closely, and when the little blockade runner slipped out to sea at midnight on 19 December 1862, *Tuscarora* followed. A blank cartridge fired failing to bring *Calypso* to, the Yankee warship tried two eleven-inch shells at a range of one-half mile. Both missed their target. At this opportune moment, *Calypso*'s luck changed. A squall came up, and while it continued she shifted her course and escaped unscathed.[5]

The commander of *Tuscarora* described *Calypso* as 'an iron, screw steamer of about 600 tons; three masts, foremast square-rigged, poop-deck cabins, topgallant forecastle, deep-waisted, bowsprit and short jib boom, wheel on poop forward of mizzenmast, smoke pipe forward of mainmast, and very near it; has bridge across the deck forward of smoke pipe; guard-strake plank above the water line; draft 11 feet.'[5]

Available records do not show when *Calypso* made her first run through the Federal blockade. It is clearly established, however, that she sailed from Charleston, South Carolina, for Nassau on or about 7 February 1863, with a cargo consisting of 642 bales of cotton.[6]

[3] Despatch No. 38, Eastman to Seward, dated 27 November 1862.

[4] Despatch No. 40, Eastman to Seward, dated 11 December 1862.

[5] *Official Records of the Union and Confederate Navies in the War of the Rebellion,* Series I, Vol. 2, p. 3, Report of the Commander of the U.S.S. *Tuscarora* to U. S. Secretary of the Navy Gideon Welles. Hereafter cited as *Union and Confederate Navies.*

[6] Outward manifest, register of export duty, and entry in Cotton Bond Book 2, p. 31, records of

Calypso returned to Charleston from Nassau on 17 March 1863,[7] took on 732 bales of cotton, and cleared for the New Providence capital on or about 30 March 1863. Her master was H. M. A. James.[8]

She made her third run into Charleston harbor on 15 May 1863,[9] and cleared for Nassau on 22 May, with 831 bales of cotton aboard.[10]

H. M. A. James had brought her in, but a new master, W. F. Black, was in command when she left Charleston.[11]

Zebina Eastman dutifully reported to Secretary Seward on 17 June 1863 that the captain and crew who took *Calypso* from Bristol to Nassau had returned to Bristol with the report that their ship had been sold to the Confederate government while lying in Charleston harbor.[12] This explains the change in command.

Before this despatch was written, *Calypso*'s ownership had changed again.

At 3:00 P.M., on 11 June 1863, while off the western bar near Wilmington, North Carolina, the United States steamer *Florida* sighted and gave chase to a strange steamer that showed no flag. Pursuit was made difficult by heavy squalls with rain, but at 5:45 P.M. the stranger was brought to by three shots from *Florida*'s forward pivot gun. The prize proved to be *Calypso*, bound from Nassau to Wilmington under the command of Captain Black. Her crew cut the injection pipes and damaged the vessel's engine before her captor could prevent them. They and the passengers on board attempted to escape in small boats, but all were captured. A Confederate flag and many private papers were found on *Calypso*. Some of her cargo, including iron plating for ironclads, had been jettisoned. Fifty prisoners were taken, including nine passengers.[12a]

Calypso was libelled 22 June 1863. Her cargo was inventoried and val-

the Collector of Customs for the Port and District of Charleston (Record Group 56, National Archives), give date of clearance as 3 February, or 7 February 1863.

[7] The *Charleston Daily Courier*, 18 March 1863.

[8] Outward manifest and register of export duty. Records of the Collector of Customs for the Port and District of Charleston (Record Group 56, National Archives).

[9] Abstract of Foreign Vessels Entered District of Charleston From Foreign Countries During Quarter Ending 30 June 1863. Records of the Collector of Customs for the Port and District of Charleston (Record Group 56, National Archives).

[10] Abstract of Vessels Cleared From District of Charleston for Foreign Countries for Quarter Ending 30 June 1863. Records of the Collector of Customs for the Port and District of Charleston (Record Group 56, National Archives).

[11] Cotton Bond Book 2, p. 55, Records of the Collector of Customs for the Port and District of Charleston.

[12] Despatch No. 23. Mr. Grahame E. Farr, of Bristol, England, states in a letter to the editors of THE AMERICAN NEPTUNE dated 9 August 1946 that *Calypso* was built at Dumbarton in 1855, and was sold by the Bristol General Steam Navigation Company in June 1863. He does not give the name of the purchaser.

[12a] Log of U. S. steamer *Florida*. Records of the Bureau of Naval Personnel (U. S.) (Record Group 24, National Archives). *Union and Confederate Navies*, Series I, Vol. 9, p. 73.

ued at $38,416.14. It included, among other things, stationery, mackerel, linseed oil, lard, pencils, 9,992 pounds of iron plates, clay pipes, playing cards, printing paper, ginghams, boots and shoes, gaiters, coffee, bourbon, ale, whiskey, pepper, olive oil, linens, thread, muslins, old blankets, pillows, hoop skirts, dry goods, notions, and soap.

The United States Navy took *Calypso,* her appurtenances, and 200 tons of coal at their appraised value—$48,500.[13] The net proceeds derived from the sale of the vessel and her cargo was $74,339.98. The court ordered that this amount be paid into the Treasury of the United States for distribution, and decreed that U.S.S. *Florida* was the only vessel entitled to share in the prize money.[14]

Calypso's career did not end with her capture. Converted into an armed steamer by the United States Navy, christened U.S.S. *Calypso,* and manned with a Yankee crew, she was sent south to capture blockade runners.

In a letter dated 27 June 1899,[15] to A. H. Nelson, of Chicago, Illinois, John M. Hawley, Chief of the Bureau of Navigation, United States Navy Department, gave the following description of the newly christened U.S.S. *Calypso*:

Class: Captured vessel. Tonnage 630
Hull: Iron
Acquisition: Purchased from Prize Court
Propulsion: Screw
Rigs: Three masted schooner
Length: 175 feet, 2 inches
Beam: 26 feet, 6 inches
Depth: 14 feet, 5 inches
Draft: 12 feet
Engines: 2
Kind: Steeple geared, 2½ to 1
Boilers: 2
Coal: 145
Speed: Maximum 12
Battery on 24 November 1863: 2 Parrott rifles 30 pds.,
4 24 pds.
History: Captured schooner *Herald* 23 October 1863
Captured steamer *Lady Sterling* 28 October 1864
Put out of commission 15 August 1865 at New York and sold for $25,000.

[13] Reports of Prize Cases at Philadelphia, Pa., Vol. 1, pp. 310, 316. Naval Records Collection of the Office of Naval Records and Library (Record Group 45, National Archives).

[14] Ibid., Vol. 2, pp. 18, 286.

[15] Records of the U. S. Department of the Navy in the National Archives.

Juno[16] was the steamer from Bristol to test the blockade of the Carolina ports. The watchful Zebina Eastman wrote Secretary Seward on 8 July 1863,[17] that she had left three days previously for Nassau, 'designing to run the blockade.' She was under the command of one Taylor, who had been the mate of *Calypso* when she had sailed from Bristol to engage in the trade.

Juno, Eastman added, was a side-wheel steamer, very sharp and reported to be very fast. She had two masts and a fore-and-aft rig. Her bottom was painted black, and 'her upper and wood work, cabin, etc., painted in a dark cream color or oak-grain color. She had no bowsprit. Her quarter deck rise was about 2½ feet.' She had been fitted out by 'the infamous

[16] Two steamers named *Juno* ran into and out of the Carolina ports. The career of *Juno*, of Bristol, as a runner is narrated herein. The other *Juno*, whose name later was changed to *Helen*, appears to have come from Liverpool. Dudley, U. S. Consul at that place, furnished Secretary of State Seward with the following description of her:

'Iron-built screw steamer, three masted, fore and aft schooner, 874 T. register. Capt. Cole. Length overall 246 feet, breadth of beam 27 feet. Marked draft 17 feet aft, 16 feet forward, plain stem, round stern, flush deck fore and aft. One pipe or funnel.'

An abstract of light money received and a register of import duties found among the records of the Collector of Customs for the District and Port of Charleston deposited in the National Archives, show that this vessel first entered Charleston on or about 8 July 1863. An undated crew list discovered among the same records discloses that her master was Philip Porcher, her mates were T. W. Benthall, W. H. Odenheimer, and C. D. Tucker, and her pilot was —— Westcoat. Three engineers and 22 other persons whose respective duties were not stated also were named on the list.

Juno, of Liverpool, was used temporarily by the Confederate government as a steam tender in Charleston harbor, as is shown by the 'Report on the operations of the Navy Department since January 10, 1863,' made by S. R. Mallory, Secretary of the Navy, C.S.A., to the President of the Confederate government on 30 November 1863. (*Union and Confederate Navies*, Series II, Vol. 2, pp. 528-536.)

She also performed picket duty under the command of Philip Porcher as a lieutenant in the Confederate Navy. On the night of 5 August 1863, while operating in that capacity below Fort Sumter, she was attacked by and captured a launch from one of the blockading vessels and the majority of its crew. (*Union and Confederate Navies*, Series I, Vol. 14, pp. 425-427.)

On 8 March 1864, William H. Peters, Navy Department Agent (C.S.A.) at Charleston, shipped 220 bales of cotton to Nassau on the steamer *Helen*, and Philip Porcher, the vessel's master, also put eight bales owned by him on board. That *Helen* was the former *Juno* is indicated by the fact that the copy of the outward manifest shows the cotton was 'laden for export ... on board the steamer *Juno Helen*.'

The *Charleston Daily Courier*, on 27 July 1864, published a letter from J. Harry Dent, who had been aboard *Helen* (*Juno*) when she left Charleston, giving a vivid account of her loss at sea. He refers to her only as *Juno*.

She had left Charleston on the evening of 9 March, he wrote, making between 12 and 13 knots until 1:00 A.M. on the tenth. Heavy weather then came up. A leak was discovered amidships at 10:00 A.M. Sixty bales of cotton were thrown overboard and all the water was pumped out. Captain Porcher thought his vessel would survive, but the gale, which had been very heavy, increased. *Juno*'s bulwarks and wheelhouses were stove in, and she shipped water every sea. About 2:00 P.M., it was discovered she was taking in water faster than it could be pumped out. Then it began to rise above the furnaces. The engine room was abandoned. Porcher set all sail and tried to reach land, 100 miles distant. But her forward and after holds had some 200 bales of cotton stowed in them, and this threw a great strain amidships as *Juno* was pitched high in the heavy sea. About 6:00 P.M. she broke in two with an awful crash. The forward part went down immediately, the after part in a few minutes. Captain Porcher, Dent, the pilot, and several sailors jumped into the lifeboat. It capsized. Dent caught on to some wreckage, as did the pilot. They both held on for 17 hours and then were thrown a line by the schooner *Petrel*, which had run out of Charleston the night after *Juno*.

[17] Despatch No. 28.

W. S. Lindsay, of Parliamentary and shipping notoriety, or his shipping firm,' he wrote.[18]

Bermuda, not Nassau, was *Juno*'s real destination. En route, she was forced to put in at Fayal for coal. None was to be had, except from the United States consul there, who, naturally, was unwilling to oblige.[19] To make bad matters worse, the United States steam sloop *Kearsarge* was lying at anchor in the harbor. Alarmed by her presence, Taylor put *Juno* to sea and steamed eastward through the islands. *Kearsarge* took off in hot pursuit, but her boilers began to foam, and, consequently, her speed was so retarded *Juno* ran into Angra (Terceira) about three quarters of an hour ahead of her.[19]

Having been unable to escape from the Yankee warship, the wily Taylor decided to resort to guile.

The day after the two vessels dropped anchor at Angra, he boarded *Kearsarge* and asked Captain Winslow why his sloop had fired at *Juno*. Told that it was because *Kearsarge* had wanted *Juno* to heave to, the British master inquired whether Winslow wanted to examine the steamer. The captain replied that he did. Thereupon, Taylor expressed the wish that he could come aboard *Juno* and examine her papers and cargo *while she lay in port*. Such effrontery astounded Winslow. He wrote Secretary Welles: 'A proposition so singular could but have the effect of awakening suspicion that a part of his cargo had been discharged, which would be returned after examination.' The invitation was not accepted.[19]

Three days later, having taken on coal, *Juno* left Angra harbor. *Kearsarge* followed her out to sea.

'Instead of pursuing his course to the westward for Bermuda, his reported place of destination,' Winslow wrote Secretary Welles, 'he steamed to the eastward, close along the land, taking a course around the island, endeavoring to elude us by dodging, at one time going through a passage between Cabras Island of only some 60 feet in width at the entrance, and gaining on us half a mile or more.'[19]

Finding that he could not elude *Kearsarge* and that she could outsteam his vessel, the British master again went into his bag of tricks. He hailed Winslow and asked whether the latter would like to examine *Juno* then and there. The captain was not to be caught so easily. He promptly declined, saying he would not send a party on board *Juno* until she was more than three miles from land.[19]

'After one or two more shifts,' Winslow reported,[19] 'he steamed to the

[18] Eastman to Seward, Despatch No. 31, dated 23 July 1863.

[19] Report, Jno. A. Winslow, Captain, commanding *Kearsarge*, to U. S. Secretary of the Navy Gideon Welles, dated 27 July 1863. (*Union and Confederate Navies*, Series I, Vol. 2, p. 412.)

northward. As soon as he got beyond neutral jurisdiction, . . . I sent a party [on board] and ordered an examination. The sea was heavy, and it being desirable to get into smoother water for this object, we steamed toward Fayal and in a more direct course for Bermuda, his port of destination, at the same time making such an examination as was practicable. On the following morning, while off Fayal and engaged in this work, the British consul pulled to sea and came on board to make enquiries, when all facilities were offered to him for this purpose. At 5 o'clock in the afternoon, about twenty-eight hours after we had taken him, I directed his release, it being found impossible to search him thoroughly without throwing overboard his coals. The examination, as far as held, showed him to be laden in part with cotton sheetings, cotton cards for carding cotton, quantities of drugs, and sundries. After his release, I learned from the searching officer that a passenger who had the whole saloon for his use had informed him that on the capture he had burned all his letters. . . .'[19]

Did the British master succeed in luring *Kearsarge* into his carefully designed trap? Did Captain Winslow's boarding party seize and search *Juno* within the three-mile limit? Apparently, he did; or, at least, Her Britannic Majesty's consul believed he had, because Winslow reported to Secretary Welles:[19] '. . . I have been thus particular in the narrative of this case, as I understand that the British consul has made a protest, with statement of the affair, to his Government. . . .'

In all events, *Juno* proceeded to Bermuda without further incident, arriving there on 3 August 1863.

On the 15th of the following month, she ran through the blockading fleet off Wilmington, North Carolina, without detection and dropped anchor in the harbor.

Aboard the runner, her purser wrote exultantly:

> We left Bermudas last Friday, 11th instant, and arrived at Wilmington on the 15th instant about midnight. Although the port was said to be blockaded by those smart Yankees, and there were supposed to be two squadrons of ships off the bar—an inner and an outer—we came right in without so much as seeing one. . . .
>
> We load with cotton and are off for Bermuda Saturday next, 19th, if possible, for if we don't get off by then, we have to wait a fortnight until the moon is over, for we cannot get out from here unless it is a very dark night. . . .

This letter was destined never to reach the writer's British correspondent. Instead, it was to fall into the hands of those 'smart Yankees' whose failure to catch *Juno* on her inward run had inspired his derision.

Something happened to delay *Juno*'s departure from Wilmington. It

was almost daylight on 22 September when she slipped her moorings and headed for the open sea. And day had scarcely dawned when the morning watch on U.S.S. *Connecticut* saw her, and the chase was on. Hoisting her colors, the Federal warship fired a blank cartridge, ordering *Juno* to heave to. Instead, the runner showed her British colors and dashed on at full speed. Men swarmed on her deck, throwing bales of cotton and boxes over her sides. 'It was a very smart chase of two hours,' Commander John J. Almy, of *Connecticut*, reported.[20] It was not until *Connecticut* had fired seventeen rifled cannon shot over and near the English steamer that the latter hauled down her flag and surrendered.[20]

Juno's register tonnage, Almy stated,[20] was about 246. Her master was John Davis Taylor. She was said to be about ten years old, and her cargo was reported to consist of about 250 bales of upland cotton, a quantity of leaf and plug tobacco, and some cigars.[20]

The captured runner was sent to Boston, Massachusetts, where she was libelled on 1 October 1863.[21] The inventory taken of her cargo when captured showed that she carried 213 bales and 64 bags of upland cotton, 3 bags of cotton pickings, 4 barrels of spirits of turpentine, and 35 cases of tobacco.[21] Vessel and cargo were condemned and sold for $135,102.11. The amount available for distribution, after deducting costs, fees, and expenses, was $130,393.67.[21]

Flora was the third Bristol steamer to ignore President Lincoln's proclamation of blockade. Zebina Eastman wrote Secretary Seward on 23 July 1863 that she was being fitted out in that port by 'the infamous W. S. Lindsay . . . or his shipping firm.'[22] She had been sold, he reported, for £35,000—£3,000 more than she cost new. Her cargo was believed to include a large quantity of small arms.[22] She had been stripped of all her cabin works inside, and changed from a cargo to a passenger ship. She was, he stated, 'a side-wheel iron steamer, 200 feet long, breadth 40 feet, about 450 tons burden, two smoke pipes standing fore and aft, schooner-rigged with light spars. No figure head and an unusual [*sic*] straight stem for an English boat. Painted black. Smoke pipes black with a white circle three or four feet from the top. Bottom coated with a light or drab-colored composition—has a topgallant forecastle deck over her about 25 feet in length. She carries on her stern in small gilt letters *Flora, of London*, put on new, on her paddle box or wheel house, circling over what was

[20] Official Report, Almy to U. S. Secretary of the Navy, Gideon Welles, dated 22 September 1863. (*Union and Confederate Navies*, Series I, Vol. 9, p. 213.)

[21] Reports of Prize Cases at Boston, Mass., and Springfield, Ill., Navy Department, pp. 112, 122 (Record Group 19, National Archives).

[22] Despatch No. 31.

formerly *Flora of Bristol,* but these letters are now taken off.' He added that *Flora* was said to be 'the fastest running steamer of the Bristol Channel.'[22]

Flora's departure from Bristol to engage in blockade running was reported by an undesignated British newspaper under the heading *'Departure of the Flora—Exciting Scene.'*[23]

Lying in Cumberland Basin, according to the news item, *Flora* had attracted hundreds of spectators because of the prevalent rumors respecting her destination. She had shipped her stores for Bermuda, and when she was towed out of the Basin the piers, the roads, and the cliffs were crowded with spectators, 'and cheer after cheer burst forth from hundreds and thousands of British lungs. . . . We have no doubt,' it said, 'that in her new sphere she will retain the name for excellent speed which she has gained since she has been upon this station.'

Like her predecessors, *Calypso* and *Juno, Flora* was destined never to return to Bristol. But unlike them, she was not to fall prey to Yankee blockaders. Instead, she was to go down at sea with her colors flying.

Figuratively smacking his lips over the good news he was imparting to his superior officer, Zebina Eastman informed Seward of the loss of *Flora,* and enclosed a clipping from an undesignated British newspaper giving a résumé of her career and the story of her last voyage.[24] Referring to *Flora* as 'the last of the blockade runners which left this port,' he added: 'I have the satisfaction of stating that all the blockade runners which have left this port, and all which I have found it my duty specially to report as having sailed from other ports, have been captured, or have been destroyed or lost.'

The clipping forwarded by Eastman to Seward read substantially as follows:

> On Monday, 27 July 1863, the fine steamer *Flora,* which had for some time been a great favourite at Bristol had been towed out to sea.
>
> After running the blockade four times in gallant style, and surmounting more than ordinary dangers and difficulties, thoroughly establishing the confidence of the crew in her, she had gone down in January 1864, within 60 miles of Bermuda.

A Bristolian who went out in her, 'and who was one of the few who did so who followed her fortunes to the last,' had furnished the newspaper with the following narrative (which as given here is almost verbatim):

> *Flora* left Bristol on a voyage to Bermuda, calling at the Western Isles. At the lat-

[23] Clipping enclosed with Eastman's Despatch No. 35, dated 28 July 1863, to Seward.
[24] Despatch No. 4, dated 19 February 1864.

ter place, she remained three days, and at the former, eight, finally running the blockade into Wilmington, which she reached on the 27th night from Bristol.

Between Bermuda and Wilmington, she made four successive trips, arriving at Bermuda on the last occasion on 17 December, with a hole in her, she having struck upon a rock in entering the harbour in a gale of wind. On her passage her engines had become disabled, and she was detained 24 hours in consequence. She arrived at St. George's after dark, and a pilot was signaled for, but none came out, and the captain thinking it was not safe for her to remain all night outside in her crippled state, ran for the harbour, in making which the steamer unfortunately struck on a rock. Repairs could not be made in Bermuda and she must go to Halifax, N. S. A diver put a patch of iron plate over the hole and said there was no other damage to her hull. The captain, chief, and third officer, as well as nearly all the crew having left *Flora* to join another vessel, a fresh crew was shipped to take *Flora* to Halifax. She left St. George's on 8 January, with a crew of 50 officers and men. About 8 P.M., a fireman reported she had sprung a leak. The pumps were put on. At about 10 P.M. the crank-pin came out of the port engine and at that time there were 18 inches of water above the footplates in the stoke-hold. The engineer ordered the engines stopped. The fires were drawn. In spite of the fact that all pumps and buckets were rigged, the water increased and by the next day the engine room was full. Hope was abandoned when a heavy gale came up on the tenth, but somehow *Flora* managed to keep afloat. The next day the British Brigantine *Valourous*, of Pictou, Nova Scotia, bound for Cuba, hove into sight. A heavy sea was still running, but *Flora*'s crew was successfully transferred to the brigantine. At 4:30 P.M. *Flora* went down, stern first, her Union Jack flying at her bow.

The narrative described *Flora* as 'a paddle steamboat, 357 tons register, built on the Clyde for the Bristol Steam Navigation Company in 1858,' and stated that she ran between Bristol and Cork until the summer of 1863. When she left to run the blockade she had been under the command of Captain James, and her crew was composed largely of Bristol men. Captain James, it said, had died after making the first run through the blockade, and after his death the great majority of the Bristol men in the crew left her, fearing that the vessel was to be transferred to the Confederates. However, *Flora* continued to be the property of the same owners and to carry the British flag.

The accuracy of the statement in the above narrative with respect to the number of times *Flora* ran the blockade is established by a report made to Secretary Seward by the United States consul at Bermuda, on 30 June 1864 (Despatch No. 129), showing arrivals and departures at Bermuda between 1 June 1862 and 30 June 1864 of vessels employed in trade with the southern ports of the United States. From this report, it appears that *Flora*, 359 tons, arrived at Bermuda from Wilmington on 15 September, 15 October, 18 November, and 20 December 1863. Her masters on these runs were James, on the first; Gillham on the second; and Horner on the third and fourth.

In this report, in commenting on the enormous profits derived from blockade running, the consul observed that when *Flora* went down 'she had standing to her credit on the agent's books here 173,000 pounds sterling.'

Old Dominion was the last steamer from Bristol to engage in blockade running.

On 18 May 1864, Zebina Eastman reported to Secretary Seward that 'a very fine, iron steamship, quite new, made on the Clyde, and recently owned by the Steam Navigation Company of this City,—called the *Alfred*—has been sold, it is said, to the Confederates to be fitted out as a Blockade Runner.'[25] He added that *Alfred* was about 800 tons burden, and 'one of the finest that has ever entered this port, and one of the fastest—has sailed 20 knots an hour on her trial trip.' The name, *Alfred,* he wrote, had been removed and that of *Old Dominion* put on in its stead. A clipping from an undesignated newspaper enclosed in his despatch reported the sale of *Alfred* to a London firm and stated that the steamer was to be employed in American waters 'for commercial purposes of a speculative character.' It added that the price paid for *Alfred* represented a handsome profit for the seller, and that the ship would be ready to sail in eight or ten days.[25]

Eastman supplied Secretary Seward with the following description of *Old Dominion.*

> Side-wheel steamer, beautiful model and powerful engines. . . . Carries two masts painted oak color, two chimneys painted black standing fore and aft, with a white band painted round them near the top, with a good deal of pitch or lean . . . painted black all over, the roof of the after cabin painted white . . . paddle wheels, and eight boats, some painted black and some white, and several deck houses painted oak color.[26]

To assist the roving cruisers and the blockading vessels of the United States Navy in identifying *Old Dominion,* he enclosed a photograph of her made at her dock in Bristol, and reported that preparations had been made to repaint her after she had left Bristol and before she reached the coast of the United States.[26]

The steamer sailed for Bermuda on 1 June 1864, laden with a number of cases supposed by Eastman to contain arms and ammunition.[27]

A narrative account of what Consul Eastman was pleased to term the 'evil practices' of *Old Dominion* as a blockade runner was published in a Bristol newspaper under the title 'Blockade Running by the Old Do-

[25] Despatch No. 66.
[26] Despatch No. 69, dated 26 May 1864.
[27] Despatch No. 71, Eastman to Seward, dated 2 June 1864.

minion.' The consul clipped this narrative from the paper and forwarded it to Secretary Seward with his Despatch No. 111, dated 13 April 1865. The narrative was based on information supplied by the steamer's master, Captain Page. It states in substance:

Old Dominion was 800 tons burden and had 250 horsepower. She sailed from Bristol on 2 June 1864,[28] and reached Bermuda on 14 June 1864.

On 25 June 1864, she left Bermuda on her first trip to 'Secessia,' carrying a large cargo and several passengers.

At daybreak on the morning of 27 June, she fell in with three Yankee steamers, was chased, and was repeatedly fired at. Five additional Yankee ships joined the chase, but only three of the enemy vessels, one on each side and one in the rear, could keep up with her. *Old Dominion* ran across the bow of the steamer on her starboard side, eluded her pursuers, and got safely into Wilmington the next day at midnight after a narrow escape. Going through the vessels off the bar, she had been fired at and one of her men had been killed and two of her passengers had been injured.

Old Dominion left the Confederate port on 15 July 1864, and reached Bermuda safely with 1,030 bales of cotton.

On 6 August 1864, she set out again for Wilmington. Chased by two armed steamers on 9 August, she was obliged to land her passengers and mail on the beach. On the next night, she succeeded in getting into the Confederate port.

The blockade of Wilmington was so tight *Old Dominion* was unable to get to sea until the night of 5 September 1864. This time her destination was Halifax, Nova Scotia, where she arrived on 10 September.

On 2 October 1864, the runner sailed on her third attempt to penetrate the blockade at Wilmington. After failing on three successive nights, she had to return to Halifax for coal.

Old Dominion left Halifax again on 12 November 1864. This time she was successful, dropping her anchor in Wilmington harbor on the 15th.[29] She brought a full cargo and a number of passengers.

On 8 December 1864, *Old Dominion* ran out of Wilmington with cotton and passengers for Nassau and arrived without difficulty at that busy center of blockading activities.

From Nassau, she went back to Halifax to get her bottom cleaned. That work accomplished, she sailed for Bermuda on 10 January 1865, intending to leave that place for Wilmington on 21 January. But this run was not to be made. Just as she was ready to start, news came of the fall of Fort Fisher.

Old Dominion was ordered back to England, where she arrived safely. Captain Page was quoted as saying that she had proved to be 'a valuable

[28] It will be noted that Consul Eastman had given her date of departure from Bristol as 1 June 1864.

[29] This date may be incorrect. In a letter from George A. Trenholm, the Confederate Secretary of the Treasury, to his former firm, Fraser, Trenholm and Company, of Liverpool, dated 25 November 1864, the writer states that *Old Dominion* arrived at Wilmington from Halifax, N. S., on 21 November 1864. (*Letters of the Secretary of the Treasury of the Confederate States of America on deposit in the National Archives.*)

speculation.' Consul Eastman's reaction to *Old Dominion*'s return was one of undisguised chagrin. 'This,' he wrote, 'is the only ship which has sailed from this port which did not meet with an appropriate end: capture or destruction.'[30]

[30] Despatch No. 111, Eastman to Seward, dated 13 April 1865.

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Origin and Diffusion of Oculi

BY RICHARD LeBARON BOWEN, JR.

IN a recent criticism Professor Carroll Quigley[1] has challenged some of the conclusions I reached as to the origins and diffusion of boat oculi.[2] Professor Quigley charges that my interpretations of the new data on oculi which I presented are 'quite mistaken.' He states that Romans could not possibly have transmitted the oculus to the Indian Ocean as I theorized, because no Roman probably ever visited India and certainly no Roman ship ever sailed to India. I will treat these criticisms in detail and show that, quite to the contrary, there is good evidence that ships of typically Roman design actually did sail to India. Professor Quigley suggests that the oculus was not originally invented in the Mediterranean by the Egyptians, but rather that it was invented in the Indian Ocean and diffused to the Mediterranean by the Semites. I will show that there is no evidence of any kind to substantiate such an origin.

Professor Quigley has misinterpreted what I said in several instances. I certainly never stated that the Romans invented the oculus, and I do not believe that what I wrote, when taken as a whole, implies that the Romans invented the oculus. Admittedly certain passages are not absolutely clear, and others might possibly arrive at the same interpretations as Professor Quigley. However, I am now putting myself on record as holding that the Egyptians invented the boat oculus, and that this original oculus was diffused over the Mediterranean so that all oculi found today in the Mediterranean are derived from the Egyptian form. I maintain that the oculi found in the Indian Ocean diffused there from the Mediterranean in Roman times.

Professor Quigley states (p. 192): 'It is also notable, in view of Mr. Bowen's emphasis on Rome's nautical influence on India, that Rome never had a standing fleet east of Suez, and that the fleets which were oc-

[1] C. Quigley, 'Certain Considerations on the Origin and Diffusion of Oculi,' THE AMERICAN NEPTUNE, XV (1955), 191-198.

[2] R. LeB. Bowen, Jr., 'Maritime Superstitions of the Arabs,' THE AMERICAN NEPTUNE, XV (1955), 5-48.

casionally used in that area (such as the crossing of the Red Sea by Aelius Gallus in 24 B.C.) were local vessels in temporary service.' It is not evident whether or not he is implying that because there was no fleet in the Red Sea or the Indian Ocean there could not have been any Roman merchant vessels.

However, there are several facts which indicate that a naval force was not necessary. In reference to Gallus' Arabian expedition, Strabo related that 'the first mistake was to build longships [warships] when there was and would be no war on the sea. For the Arabs are not very warlike even on land, but rather traders and merchants and not at all warlike on the sea.' In a battle at 'the river' (probably Wadi Kharid) the Romans, under Gallus, slew no fewer than 10,000 Arabs, losing only two of their own men, according to Strabo. Certainly this gives a graphic picture of the superiority of the Roman soldier and his armament over the Arab warrior.

While there was always the threat of pirates, this danger was no worse in the Red Sea than it was at times in the Mediterranean. Pliny relates that archers were carried aboard the ships leaving Myos Hormus or Berenice (ancient Red Sea ports) as protection against pirates. Besides this, the *Periplus of the Erythraean Sea* (ch. 23) relates that Rome was in alliance with a South Arabian ruler and that 'continual embassies and gifts' were sent by the emperor. Further, Trajan reduced the Arab state of Nabataea to a Roman province in A.D. 106. All this tended to make the use of naval forces in the Red Sea and the Indian Ocean unnecessary.

Professor Quigley points out (p. 193) that Charlesworth's statements about Romans and Roman colonies in India do not necessarily mean that Latin-speaking Romans were in India, but rather that Roman subjects (who could include Egyptians, Greeks, or Arabs) were there. He remarks that the use of the Sanskrit word 'Yavana' to refer to these colonists indicates that they were Greek-speaking, since the word was derived from the Persian name of the (Ionian) Greeks.

Sir Mortimer Wheeler has recently considered this problem very thoroughly, and he does not come to the conclusion that the Yavanas were necessarily entirely Greek-speaking.[3] He points out that at the start of the Christian era the word Yavana (or Yonaka) was used in reference to certain Indians, probably originating in the Indo-Greek kingdom to the north. He further states that, apart from this secondary use of the word, the Yavanas and Yonakas of Indian literature 'are normally Westerners in the fullest meaning of the term.' He later states that

[3] Sir Mortimer Wheeler, *Rome Beyond the Imperial Frontiers* (New York: Philosophical Library, 1955), pp. 132-134.

The Yavana sailors must mostly have been Egyptian Greeks and Arabs, but we may suppose that here and there a more or less resident freedman represented the interests of a master sitting afar off in one of the shipping offices of Alexandria or Ostia, Myos Hormos or Berenice.[4]

Professor Quigley says that Charlesworth consistently uses the terms Romans, Roman colonists, and Roman vessels in an ambiguous sense in referring to the Greek-speaking persons in India. In my article I committed the same sin as Charlesworth and many others by referring to Roman colonists in India and Roman subjects in the Indian Ocean as 'Romans.' While there is no basis for saying that these persons were composed entirely of Greek-speaking persons, there is little doubt that the majority of these Yavanas in India were Greek-speaking. Therefore, to be technically correct, one should read 'Roman subjects' in all instances where I have referred to 'Romans' in the Indian Ocean. Thus my hypothesis is only altered slightly to the following: It seems probable that Roman subjects introduced the colored end patch with oculus to India in the early centuries of the Christian era, and that the South Arabians copied the idea either from Roman subjects or Indians about the same time.

It might well be argued that if I now say that most of the Romans in the Indian Ocean were Greek-speaking, I am contradicting what I have previously written concerning the Greeks. I did contrast the Greeks with the Romans in several instances.[5] However, it was my intent to use the terms 'Greeks' and 'Romans' to distinguish the peoples of two different periods, one of which followed the other. It would have been clearer to have used 'Greek times' and 'Roman times.' I did not intend to distinguish between Latin-speaking and Greek-speaking people. A distinction of time is certainly indicated in my references to Sicily when I referred to Greek colonists, for such colonization took place in the eighth and seventh centuries B.C.

When I referred to Greek art, I had in mind the seventh to the fourth centuries B.C., since the reference was to Greek colonists. While 'Greek art' is often used to refer to antiquity, the term can also be used for modern Greek art. And it certainly covers Hellenistic times. Such terms as 'Greeks and Romans' and 'Greek art' are admittedly ambiguous and often confusing in the manner in which I have used them without definition.

I stated that the Greeks did not decorate the ends of their boats in the same way as the Egyptians or the Romans.[6] This section was intended to bring out the fact that the Greeks did not decorate the ends of their boats

[4] Ibid., p. 179.
[5] R. LeB. Bowen, Jr., op. cit., pp. 19, 20, 24.
[6] Ibid., p. 19.

with painted fields containing figures or oculi. Actually I believe that the Greeks are responsible for some of the details of the final boat end complexes found on Roman boats in the Mediterranean, but I do not believe that these evolved to their final form until Roman times. Professor Quigley states (p. 194) that the Greeks did not ever copy any shipbuilding techniques from the Romans. Such does not seem to be the case, for the evidence indicates that during Roman times certain Greeks did adopt shipbuilding techniques that may be called Roman.

What Professor Quigley says about identifying Roman colonists in India as Greek-speaking people seems to indicate that he agrees that Greek-speaking Roman subjects sailed ships to India and formed colonies there. Strabo, apparently referring to the first century B.C., relates that formerly under the Ptolemies only a few ships sailed to India annually, but he indicates that in the Principate of Augustus no fewer than 120 ships sailed from Myos Hormos for India every year.[7]

It seems evident that Professor Quigley does not doubt the existence of an enormous trade between India and the West in the hands of the Alexandrian merchants. He must also be in accord with the assumption that a large part of the trade was carried out in vessels owned by the merchants of Alexandria. Indeed he is forced to, since the *Periplus* (ch. 52, 54) refers to 'Greek ships' and 'ships sent by Greeks' in India. However, he and others doubt that Roman ships ever formed a part of the trade. Presumably this is on the assumption that ships owned by Egyptian or Greek merchants could not technically be called 'Roman.'

Professor Quigley says (p. 193) that many authorities doubt that any Romans ever went to India. I would say that on the basis of the historical evidence we have for Arabia and China and with the archaeological evidence from India one is forced to admit that at least a few true Romans visited India. The *Periplus* tells us that the Roman emperors sent continual embassies to Arabia. Rome made contact with China at least by the second century A.D., for Chinese records tell of Roman commercial embassies sent in 166 by An-tun (Marcus Aurelius Antonius). Later visits of embassies are recorded in A.D. 222-5 and 284.[8] Therefore, it is inconceivable that the Romans did not likewise send embassies to India, to which the Romans knew that vast sums of money were going. Pliny (Bk. VI, ch. 101) commented that 'in no year does India absorb less than 50 million sestarces.' If it were not for Chinese records, we should have no record that Rome sent any embassies to China.

The fact that classical references do not say specifically that Romans

[7] Strabo, bk. 2, ch. 5, sec. 12; bk. 17, ch. 1, sec. 13.

[8] W. W. Hyde, *Ancient Greek Mariners* (New York: Oxford University Press, 1947), p. 230.

were sent to India is certainly not proof positive that they were not. I believe that many more authorities can be found who believe that Latin-speaking Romans visited India than who doubt the fact. We have seen above there is no question in the mind of Sir Mortimer Wheeler that at least a few Romans visited India. It is very important to note that he is the excavator of an ancient Indo-Roman trading station at Arikamedu on the east coast of India several miles south of Pondicherry. This site can be identified with 'Podouke' of the *Periplus*. In a very small area the excavators found something like 50 sherds of Italian Arretine ware (*c.* 30 B.C.–A.D. 45) including four with potters' stamps in Latin, 150 Mediterranean *amphora* sherds, first-century A.D. Roman glass, fragments of at least two Roman lamps, and several Greco-Roman gems.[9] Below the strata containing Roman goods was evidence of an earlier Indian village. Thus a new commercial town sprang up on the site of an insignificant native town in the first few decades of the Christian era.

It cannot be without significance that the first flood of Roman coinage and Roman goods to India are Augustan. Wheeler points out that the remoteness of the site, on the farther side of India, emphasizes the range of the new Augustan (Roman) organization and the powerful determination with which it was reaching out eastward after the sources of pearls and silk.[10] It does not make sense to claim that 'no Roman ever visited India' in view of these facts. However, the answer to this problem has little bearing on the present problem, which is whether or not Roman vessels ever entered the Indian Ocean.

By the middle of the first century B.C. the whole of the Mediterranean was under Roman domination. Lionel Casson sums up the situation by pointing out that one of history's greatest merchant marines thus came into being, with Rome emerging as the largest customer.[11] Actually we know very little about the commercial details of this thriving period, since contemporary historians usually noted only political and military events. Much of our knowledge regarding the ships engaged in this trade comes from reliefs and paintings.

The vessels used for such trade in the first and second centuries A.D. are commonly referred to as 'Roman' ships. Indeed we are forced to call them 'Roman' since it is very doubtful if anyone could separate in a precise manner the characteristics which other nationalities had contributed. One fact is certain. Most of the reproductions we have of these great cargo vessels—the Roman 'round' ships—show an amazing general similarity

[9] Sir Mortimer Wheeler, op. cit., pp. 146-149.

[10] Ibid., p. 150.

[11] L. Casson, 'Trade in the Ancient World,' *Scientific American*, November 1954, pp. 98-104.

of hull shape and rig. Nearly all have a raised stern with a graceful swan neck which is higher than the bow. Most have one great square sail, and often have a triangular topsail. Invariably they also have a small square foresail on an *artemon*, the name of the small mast for this sail which projects over the bow. The similarity of most of the examples which we have of these ships is so great that we must assume that the majority of all large cargo vessels associated with the Roman trade in the Mediterranean during this period are similar.[12] Certainly the ships which brought grain

Fig. 1. Typical Roman merchant vessel from an Alexandrian coin dated A.D. 67. Note the swan neck at the stern and the *artemon* mast and sail at the bow. (*After Torr.*)

from Egypt to Rome were of this type. This would seem to be substantiated by the fact that such a ship is shown on a first-century A.D. coin from Alexandria (Fig. 1).[13] It therefore seems reasonable to assume that the same general type of ship was used by the Alexandrian merchants in their trade with India.

This is indeed substantiated by archaeological evidence from the Indian Ocean. Our evidence is to be found in one of the seventh-century

12 Such ships from Ostia, the ancient port of Rome, and Pompeii have been shown by C. Torr, *Ancient Ships* (Cambridge: University Press, 1895), Figs. 26, 28, 29, 30. A similar vessel from a second-century relief at Sidon has been shown by G. Contenau, *La civilisation phénicienne* (Paris, 1926), p. 272. Two of the same type of vessels, presumably from Ostia, have been shown recently by L. Casson, 'A Sea Drama in Stone,' THE AMERICAN NEPTUNE, XV (1955), 217-219, Plate 12. I have also published an illustration of this type of vessel in THE AMERICAN NEPTUNE, XV (1955), 18, Fig. 11.

13 C. Torr, op. cit., Fig. 27.

Ajanta ships and on several of the eighth- or ninth-century Boro Budur ships (Fig. 2). These show without a question of doubt a bow spritsail which is identical to the Roman *artemon* mast and sail carried by Roman vessels in the Mediterranean Ocean.

Torr states that the *artemon* mast and sail are first mentioned about 100 B.C.[14] It is interesting to note that the earliest references to this *artemon* mast come from Latin sources: Lucilius, Labeo, and Seneca. There can certainly be no valid argument against calling this mast 'Roman.' There-

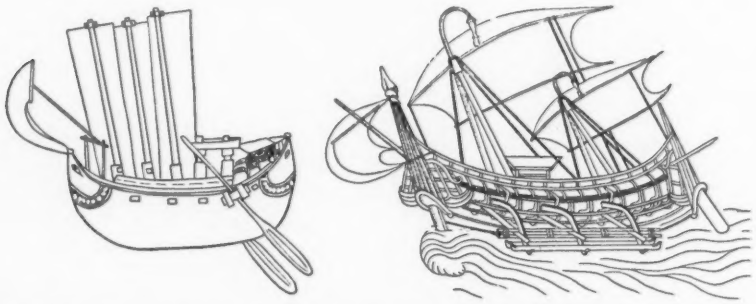

Fig. 2. Early examples of the *artemon* mast and sail from the Indian Ocean. Left: One of the seventh-century A.D. Ajanta ships with colored patches with oculi at both bow and stern (the stern oculus reconstructed by this author). The *artemon* is to the left, while the ship is propelled by three tall lug sails similar to those used by the Chinese today. *(Sketch by the author from a photograph.)* Right: Eighth- or ninth-century A.D. Boro Budur ship with *artemon* mast and balance lug sails. *(After Hornell.)*

fore it seems evident that the Indians copied the *artemon* in Roman times from vessels which were similar to the Roman merchant ships found in the Mediterranean. However, these ships were probably owned and sailed to India by Roman subjects, probably Greeks. It might be argued that the *Periplus* (ch. 52) refers specifically to 'Greek ships,' and that these must therefore differ from Roman ships. However, the *Periplus* (ch. 54) later refers to 'ships sent by Greeks' to India. I do not believe that it can be shown that the ships used in the Indian trade in Roman times were radically different from those used in the Mediterranean during the same period. It seems that Indian colonists were responsible for spreading the *artemon* sail to Indonesia, since Indians were continually migrating to Java and Sumatra after the fourth century B.C.

[14] Ibid., p. 88.

Professor Quigley states (p. 195) what he terms a 'law' of diffusion taken from Poujade: 'By this rule, techniques of hull construction diffuse more readily than sails and rigging because the former diffuse by commercial contact while the latter diffuse readily only under political domination.' If we apply this law to the problem of the *artemon* on the Ajanta ship, we must conclude that the Roman subjects in India had conquered India. This is obviously not the case.

I have previously proposed the reverse of Poujade's law:

> Foreign influence is most often shown in the sail of a craft, while the hull is more often indigenous. This is forcefully demonstrated by the Arab lateen, which is found today in the Indian Ocean on Arab, Indian, and African hulls, and until a short time ago, was found in the Mediterranean in a slightly different form on Egyptian, Turkish, Greek, Italian, Spanish, French, and North African vessels. It may be safely said that the sail is one of the most easily diffused cultural traits known to man.[15]

I came to this conclusion only after making a complete survey of the sails covering the ocean spaces between Arabia and South America. I pointed out that in many cases various native groups had adopted foreign sails and did not know how to utilize them properly.

This hypothesis easily explains the occurrence of the Roman *artemon* on seventh-century Indian vessels. It was copied from ships used by the merchants of Alexandria in the Indian trade in the first and second centuries A.D. Later the *artemon* was completely displaced in the Indian Ocean by the triangular fore-and-aft head sails used by European sailors in the seventeenth and eighteenth centuries.[16] These triangular sails are recorded on many native Indian Ocean vessels in recent times, and they are invariably made of cotton, although the other sails on the vessels are often of the traditional matting so commonly used on primitive sails in the East.

I do not believe that I have placed undue emphasis on the Ajanta *artemon*. Literary sources are of little help in solving the problem of whether or not Roman ships sailed to India, since the classical writers do not give a specific answer. The occurrence of this *artemon* mast in ancient India provides the only evidence indicating that ships of Roman type were used in the Indian trade by Egyptian merchants. It is actually very difficult to find another explanation for the occurrence of the *artemon* in India during this period. I have previously briefly mentioned the significance of the Ajanta *artemon*, but I have never elaborated on the point.[17]

[15] R. LeB. Bowen, Jr., 'Eastern Sail Affinities,' THE AMERICAN NEPTUNE, XIII (1953), 82.

[16] Ibid., p. 209.

[17] Ibid.; R. LeB. Bowen, Jr., 'Maritime Superstitions of the Arabs,' THE AMERICAN NEPTUNE, XV (1955), 20.

Professor Quigley states (p. 193) that 'The consensus that Roman vessels were absent from the area destroys Bowen's argument that oculi and red bow-patches on Indian ships were copied from Roman vessels.' Somewhat before this he stated: 'As to the Romans spreading this characteristic [use of oculi] to India, this is quite impossible.' I do not believe that my slight qualification that 'Roman subjects' rather than 'Romans' spread the colored patch and oculus to India will change his opinions, since he presents his own theories about the origin of the oculus in both the Mediterranean and the Indian Ocean.

* * * * * * * * *

In his introductory comments, Professor Quigley says (p. 191) that my interpretation of the facts which I presented 'violates known history and the recognized methods of cultural diffusion.' I believe that an analysis of the theories which he himself has proposed will show that not only has he chosen to ignore archaeological facts and refused to use the ethnological data available on modern boats, but he has also violated the principles of cultural diffusion. I have already shown that Poujade's law of diffusion on which he relies is not consistent with certain facts, and I will point out other serious discrepancies. Thus the main theory of diffusion which Professor Quigley seems to follow is meaningless.

In general it appears that Professor Quigley (pp. 196, 198) is satisfied that the use of colored bow-patches originated in Egypt. However, before this, he stated (p. 195) that it is 'much more reasonable to assume that all three [oculi, lateen sails, and bow-patches] originated at some more central locality such as the Erythraean Sea.'

Professor Quigley identifies (p. 194) the Erythraean Sea as the 'Arabic and Indian oceans.' Since there is no Arabic Ocean, it is not clear what Professor Quigley had in mind. In antiquity the Red Sea was known as the Arabian Gulf and Erythraean was the term applied only to that part of the Indian Ocean now known as the Arabian Sea (extending from western India to the Gulf of Aden). By the first century A.D. the Erythraean Sea included the Red Sea and the Indian Ocean east of India as far as the Malay Peninsula. To add to the confusion, in later times the term Erythraean was reserved for the Red Sea. I have assumed that Professor Quigley uses the term Erythraean in a broad sense to cover the Persian Gulf, the Red Sea, and the Arabian Sea.

Professor Quigley leaves us in the dark as to how the colored end patch diffused into the Indian Ocean, other than by saying (p. 196) that 'The same combination [the oculus from the Semites and colored bow-patches

from Egypt] was undoubtedly made by the Arabs of the Erythraean Sea and diffused from them to the Indians.' He feels (p. 195) that the oculus was invented somewhere in the Erythraean Sea, and that it was diffused in the Mediterranean by Semite sailors, either by an early Megalithic diffusion, by a Phoenician diffusion, or by both. However, he states (p. 198) that it is not clear whether Egyptian oculi are an independent invention, or if they came in with early Mesopotamian watercraft.

Professor Quigley (p. 195) follows these general theories with more specific hypotheses: 'If the connection between lateen sails and oculi exists . . . this could be interpreted to mean that Semite peoples had both, even in the Phoenician period, that oculi and a few lateen sails came into the Mediterranean in this period. . . .' He then follows this by stating (p. 196) that 'it seems likely that the Romans combined the two features, the oculus from the Semites and the colored bow-patches from Egypt.' However, he apparently gives us an alternate hypothesis, since he states (p. 198) that 'The use of the oculi on colored bow-patches, found both in Egypt and Rome may be associated with the Phoenician colony at Carthage.' Thus again, it is difficult to determine precisely what he does believe. At any rate, neither is true, for as we shall see later the Etruscans were already using a colored bow-patch with an oculus on it in the sixth century B.C.

Professor Quigley outlines (pp. 191-192) the history of the Roman navy from 260 B.C. to the third century A.D. and states that basically the Romans were landlubbers. He says that in general the ships were manned by non-Romans, and that up to the third century A.D. the fleets were composed of ships of non-Roman construction. He then states (p. 193) that the same was true of the Roman merchant marine. Apparently on the basis of the Roman navy during the Punic Wars, he states (p. 196) that 'Roman shipbuilding came from North Africa (Carthage) and only later from Greek models.'

It seems that Professor Quigley is very dogmatic about the origin of Roman merchant vessels. There is certainly no argument about a Carthaginian origin of some Roman longships (warships or galleys), since historical sources tell us that in 260 B.C. Roman vessels of this type were simply copies of a captured Carthaginian ship. Likewise we know that later in 242 B.C. galleys were modeled after a captured warship from Rhodes. But this certainly is not sufficient grounds for making a categorical statement that all Roman ships (merchant as well as war) were first based on Carthaginian designs and later on Greek models. In the first place, the Roman copies of Carthaginian warships made in 260 B.C. were

constructed by Greek shipwrights from southern Italy. Therefore, we can assume that the actual construction techniques used in building the ships were Greek. At any rate, what applies to warships does not necessarily apply to merchant ships.

That the Romans were originally landlubbers is an accepted fact. However, few have claimed that during the heydays of the Roman Empire the Romans were as lubberly as they were during the Punic Wars. Besides this, it is unreasonable to suppose that the early Romans did not have boats of any kind. This has been summed up by Lethbridge:

> By a curious twist of fate, it was a race of farmers [Romans] who did more to extend the ideas of European boat-building than any other people of antiquity. It would be, no doubt, quite incorrect to suppose that there were no ancient Roman merchantmen or fishing-boats before the Punic Wars.[18]

It certainly seems reasonable to suppose that by the first and second centuries A.D. Latin-speaking Romans had learned how to sail their own merchant vessels. This is substantiated by a second-century A.D. painting of a ship from Ostia which labels one man on the ship as Farnaces, captain, and another as Arascantus, presumably the shipper.[19] Professor Quigley's statement (p. 194) that '"Roman" vessels were generally built, and always manned, by non-Romans' does not seem to stand up in the light of this.

When I wrote 'Maritime Superstitions of the Arabs' I did not consider it important to attempt to trace the complete evolution of decorated boat triangles and oculi found on boats in the Mediterranean, since I was writing about the Arabs in the Indian Ocean. I pointed out that the Romans decorated both ends of their vessels at times with elaborate designs (without oculi), and that this custom very probably originated in ancient Egypt since we have illustrations of Egyptian boats with both ends decorated.[20] However, I did not mention the intermediaries. I also pointed out that the first rites connected with boats may have consisted of human sacrifice, placing a head on the raised stem and often one on the sternpost also.[21] Many ancient Egyptian boats show animal heads on both ends.

Both the practice of placing heads and painting eyes on boats spread out along the shores of the Mediterranean at a very early age, for we have evidence that either one or both of these customs reached the British Isles and Scandinavia by the Bronze Age. Heads appear to be shown on Bronze Age Scandinavian rock carvings. A wooden boat model from Britain dated

[18] T. C. Lethbridge, *Boats and Boatmen* (London: Thames & Hudson, 1952), p. 133.
[19] F. Moll, *Das Schiff in der bildenden Kunst* (Bonn, 1929), Plate B XI b, Fig. 96.
[20] R. LeB. Bowen, Jr., op. cit., p. 19.
[21] Ibid., pp. 30-34.

about 1000 B.C. has ornaments of gold foil showing an oculus on each side of the bow and sun disks along the sides, and a Bronze Age rock carving from Scotland shows a boat with a head apparently placed on the stern.[22]

Professor Quigley feels (pp. 195-198) that the oculus was introduced to the Mediterranean either by an early 'Megalithic influence from 3500 to 1500 B.C.,' or by the Phoenicians after 900 B.C. It is not apparent whether or not Professor Quigley is suggesting that the Phoenicians came from the Indian Ocean. Herodotus is responsible for the legend that the Phoenicians came from the Indian Ocean, possibly Bahrein Island. However, there is no concrete evidence to prove this. At the most there are a few classical references which might be explained this way. Therefore, it seems very unlikely that the Phoenicians could have brought the oculus from the Indian Ocean to the Mediterranean.

Professor W. F. Albright of Johns Hopkins University has written me as follows regarding Professor Quigley's 'Megalithic influence from 3500 to 1500 B.C.' in the Mediterranean:

> The Megalithic culture is a myth in the sense he uses it. This culture has not been identified anywhere in the Near East south of Palestine and Iran; moreover it can now be dated in the sixth-fifth millennia B.C. No trace has been found in Egypt (Elise Baumgärtel to the contrary). When this culture (or a remote collateral descendant of it) was flourishing in Western Europe, the Bronze Age was fully developed in Western Asia.

It is difficult to see why Professor Quigley considers (p. 195) that Phoenician influence had a range from only 900 to 200 B.C., since Phoenician origins go back into the second millennium B.C., and Phoenician merchants and sailors were certainly active before 900 B.C. At any rate Phoenician influence seems to have been eastward out of the Mediterranean, as well as westward in the Mediterranean. In the tenth century B.C. Hiram of Tyre furnished ships for Solomon for a voyage down the Red Sea, and Sennacherib used Phoenician-built ships in the seventh century B.C. for an expedition at the head of the Persian Gulf.

It seems that the Greeks are responsible for some of the designs found on Roman boat ends, although it is apparent that there was a final evolution in Roman times. Various historical references indicate that the Greeks painted colored patches on the bows of some of their boats from at least the ninth century B.C.[23] The colors were generally blue, purple, or vermilion, the rest of the hull being covered with black tar. It appears that this practice was limited to galleys, and was not used on merchant

[22] T. C. Lethbridge, op. cit., pp. 18, 123.
[23] C. Torr, op. cit., p. 36.

vessels. Torr shows a sixth-century Greek bowl with a galley and a merchant ship on it.[24] The forward bulwark of the galley has a definite triangular colored patch at its forward end. There is no eye or other design on the patch. The merchant ship has an eye at the bow only but no colored patch. Two other galleys from the same period show the forward bulwarks completely colored with eyes on these colored areas.[25]

The practice of placing human figures, animals, and fishes on boat hulls probably originated with the early Greeks. Moll shows an illustration of a sixth-century B.C. Greek galley with dolphins at both bow and stern on the body of the hull.[26] There are no colored fields surrounding the dolphins. A Roman relief of about 200 B.C. shows the sterns of two warships elaborately decorated with animals and human figures.[27] The custom of painting (or carving) human figures on colored patches at both ends of Roman boats was well developed by the second century A.D. I have published an illustration of the Porto Fluviale painting which shows both ends of a small Roman boat elaborately decorated with human figures on colored fields.[28]

In addition to linear geometrically decorated end patches on colored fields, the Egyptians also used plain-colored fields. After Egyptian times the first evidence we have of painted fields at both ends of boats comes from Etruscan sources. Pallottino shows an illustration of a sixth-century B.C. Etruscan boat with blue-green patches both fore and aft on a purple hull with an oculus on the forward patch (Fig. 3).[29] Another Etruscan illustration from the sixth century B.C. shows an oculus on a colored patch at the bow, but there is no patch at the stern (Fig. 4).[30] The Romans undoubtedly derived the idea of placing colored patches at both ends of their boats from the Etruscans. There is a Roman mosaic which shows plain-colored triangular areas at both ends of the boat, with a large circular disk-shaped oculus above the bow-patch on the forward bulwark.[31]

The intermediaries who spread the custom of painting colored patches at both ends of boats from the Egyptians to the Etruscans are not immediately apparent. It is interesting to note that many of the Egyptian patches are painted green, in view of the fact that the Etruscan boat shown

[24] Ibid., Figs. 17 & 18.
[25] Ibid., Fig. 19.
[26] F. Moll, op. cit., Plate B VI b, Fig. 112.
[27] Ibid., Plate B III b, Fig. 125.
[28] R. LeB. Bowen, Jr., op. cit., Fig. 12.
[29] M. Pallottino, *Etruscan Painting* (New York: Skira, 1952), p. 51.
[30] J. Poujade, *La Route des Indes et ses navires* (Paris: Payot, 1946), p. 222.
[31] F. Moll, op. cit., Plate B X a, Fig. 57.

in Fig. 3 has blue-green patches at both ends. The Egyptians apparently never placed the eye directly on the colored end patch, but placed it aft of the patch on a very small rectangular colored area which often appears to be of a different color from either the central hull or the end patches.[32]

I previously explained that we did not have any proof that the Romans ever placed plain-colored triangles with oculi at both ends of their boats, since we did not have any representation of such boats from Roman times.[33] Since that time I have examined a floor mosaic at Pompeii which shows a graceful little craft with a plain circular oculus on a definite col-

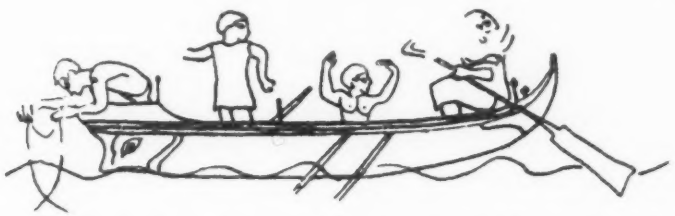

Fig. 3. Etruscan boat of the sixth century B.C. with blue green patches at both bow and stern, with an oculus on the bow patch. The hull between the patches is purple. *(Adapted from a colored plate by Pallottino.)*

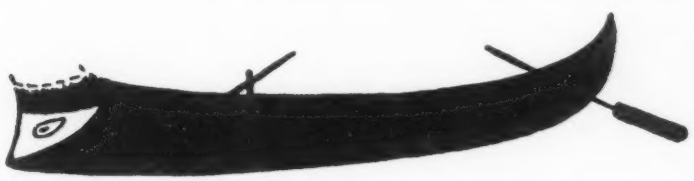

Fig. 4. Etruscan boat of the sixth century B.C. showing a colored patch at the bow with an oculus on the patch. *(After Poujade.)*

ored patch on the stern. The bow is without patch or oculi. There is also a Pompeian wall painting showing a galley with a definite small red triangular area (without oculi) on the bow. These boats from Pompeii may be placed in the first century A.D.

The first examples of stern oculi found in the Mediterranean came from Roman times. In all those I have seen there is no bow oculus, and the stern oculus is a large plain round disk. I have pointed out that one of the

[32] J. H. Breasted, Jr., *Egyptian Servant Statues* (Washington: Pantheon Books, Inc., 1948), Plates 64-66, 69.

[33] R. LeB. Bowen, Jr., op. cit., p. 24.

examples of the first century A.D. appears to have the word 'Isis' written near the oculus.[34] In reference to this Professor Quigley states (p. 196) that 'The association of the colored bow-patch with Isis even among the Romans is shown by the fact, observed by Bowen, that the patch was replaced by the word "Isis" near an oculus on some Roman vessels.' If he had referred to the source for this vessel he would have seen that the word 'Isis' was on the background of the painting and not on the boat, and thus this is no reason for associating a patch with Isis. Besides this, I definitely stated that the large oculus was on the stern, not on the bow as Professor Quigley states.

Actually, in this particular case, the word 'Isis' is followed by the word 'Geminiana.' Professor Lionel Casson has written me as follows regarding these two words:

> Isis was a rather common name for ships in those days. There are a number of examples of it. It makes sense since she seems to have been a goddess particularly favored by sailors. GEMINIANA, which etymologically has something to do with *gemini*, 'twins,' may be just a cult name for Isis or, more likely in my opinion, the family name of the owner.

However, I feel that there is some significance in the fact that the words ISIS GEMINIANA are very close to the disk placed at the stern. It almost appears that the words are a label attached to the disk. Of course there is no reason why these words could not refer to the ship.

Isis was a great Egyptian goddess. From at least the twelfth dynasty on, Isis was depicted in models of Egyptian funeral barks always standing at the stern with her hands often touching the mummy's feet.[35] The Greeks came into contact with Isis after the conquest of Egypt. The Ptolemies spared no expense in the redecoration of the temple of Isis at Philae in Egypt. The cult of Isis (along with that of Serapis) spread into Greece early in the third century B.C. Egyptian merchants introduced Isis to Italy in the first century B.C., and between 59 and 48 B.C. numerous attempts were made to suppress the cult. However, during the early Principate Isis received official recognition by Rome. There seems to be little doubt that the round disk stern oculus was associated with the worship of Isis during Roman times. Undoubtedly the disk represents the large moon-disk which is seen on most Egyptian representations of Isis placed between a pair of slender horns forming the headdress of the goddess. Thus in a strict sense this oculus is not an 'eye,' but rather a symbol of Isis.

[34] Ibid., p. 24. Professor Lionel Casson has informed me that a more proper date for this painting of a ship from Ostia is the second century A.D.

[35] J. H. Breasted, Jr., op. cit., pp. 64-65.

There was a temple of Isis at Pompeii, as there were at other Roman cities. The stern oculus seen on the ship in the Pompeian mosaic was probably dedicated to Isis. It is not evident whether or not the Egyptians placed this disk of Isis on the sterns of boats in the last half of the first millennium B.C., since we do not have any representations of Egyptian boats from this period. However, the inference seems plain that during Roman times the stern oculus was associated with Isis. Since we have no evidence that the Greeks (before Roman times) ever used patches under their bow oculi on their merchant vessels, the addition of the end patches to Roman vessels must be attributed to others than the Greeks, presumably the Etruscans.

It is evident that the Etruscan end patches with bow oculus were supplemented by a stern oculus during early Roman times in Italy and Sicily. This is substantiated by the fact that today the *only* places in the Mediterranean where oculi are found at both ends of boats are Italy and Sicily. I previously pointed out that the boats from some ports of Sicily carry oculi at both ends.[36] In a recent visit to Venice, I noticed that many of the craft seen on the canals carry crude round eyes at each end of the hull. Some show geometric painting at the ends which indicates that there were formerly larger decorated areas. That colored end patches were not generally used by the ancient Greeks at both ends of their craft would seem to be substantiated by the fact that today end patches are not to be found on modern Greek craft.

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There are two basic types of eye designs found in the various examples of boat oculi in ancient and modern times. One is the so-called anthropomorphic eye design which shows a well-drawn eye often with an eyebrow. The other type consists of a wide group of stylized eyes. Often these are round disks, or dots with a concentric circle around them. It might seem that a study of the two types used in ancient times would shed light on the origin of modern designs. However, such does not seem to be the case.

The Egyptian eye was always a well-drawn anthropomorphic eye. It was supposed to represent the eye of the hawk-headed deity Horus, and was also associated with the sun god Ra. The oculi on ancient Egyptian craft are found only on the bows. Some of the Greek eyes found on sixth- to fourth-century B.C. ships are derived from the Egyptian form of oculus, through intermediaries who are not immediately apparent. These

[36] R. LeB. Bowen, Jr., op. cit., p. 14.

Greek eyes are often amoeba-shaped and never have an eyebrow. However, the Greeks also used round geometric eyes. Moll shows almost a dozen examples of circular geometric oculi on the bows only of Greek galleys on seventh-sixth-century B.C. pottery.[37]

The Phoenicians probably used oculi similar to the Egyptian form on the bows of their boats. From the earliest times the art of the Phoenicians showed strong Egyptian influence. The only evidence we have of Phoenician oculi comes from coins, where they are shown as disks at the bows only. Besides this, the older Canaanites were the predecessors of the Phoenicians in many ways, and eye amulets swarm in Canaanite areas. Punic burial stelae are also decorated with eyes. Professor Quigley suggests (p. 195) that the oculus of the Semites may not have come into the Mediterranean until after 900 B.C. We must ask what force would prevent the Phoenicians from copying the boat oculus from the Egyptians long before 900 B.C.?

Just when the plain round oculus (disk) appeared is not certain. Many ancient coins seem to show this kind of oculus, but it does not seem that this is significant, since the actual eye on the coin is only a fraction of a millimeter in diameter. Indeed it would be difficult to show it otherwise. Round disk-shaped oculi first appear on paintings, sculptures, and mosaics in Roman times, and we have seen that many of the examples are found at the stern of the boats only. Today in Italy the anthropomorphic eye and the plain round eye are found side by side on boats on certain beaches. Hornell attempts to equate the round eyes found at Palermo in Sicily with the Phoenician colony there.[38] However, this does not seem to be the case, since this same type of round oculus is found on both the east and west coasts of Italy where there were no Phoenician colonies. Hornell shows only the anthropomorphic Greek oculus, and for some reason does not show any of the round geometric Greek oculi. Acually a well-drawn anthropomorphic eye with eyebrow is shown on many Roman galleys.

My original hypothesis that the Romans (Roman subjects) spread the oculus to the Indian Ocean was also conditioned by the boat decorations found today in Portugal and Britain, since it is evident that the Romans are responsible for these. Along the Portuguese coast north of Lisbon certain of the large flat-bottomed boats used for fishing have geometrically decorated triangular patches at both bow and stern. These patches do not have oculi on them, but are elaborately painted designs on white fields.

[37] F. Moll, op. cit., Plate B VI a.

[38] J. Hornell, 'Survival of the Use of Oculi in Modern Boats,' *Journal of the Royal Anthropological Institute*, LIII (1923), 312-313

Lethbridge has shown an illustration of one of these craft.[39] Similar designs are found on the bows of some of the river barges in Britain.[40]

The Phoenicians and the Carthaginians were not primarily colonizers. Their maritime interests were as a rule purely for trade, not for settlement. From early times the Phoenicians, and the Carthaginians after them, voyaged to the Cassiterides, the 'Tin Islands.' They kept the location so secret that today it is only known that they are in the general area of the North Atlantic above Gibraltar. The Phoenicians did establish towns at certain points along the shores, but they were depots rather than colonies. The Greeks and Romans credited the Phoenicians with founding the Port of Gades (modern Cadiz) in Spain on the Atlantic side of the Straits of Gibraltar. No Phoenician or Carthaginian settlements are known in Portugal or areas to the north. (But Punic coins have been found in the Azores, over 1,000 miles west of Portugal.)

While the Greeks made occasional trips of exploration through the Straits of Gibraltar, the expansion of Greek colonies in the Mediterranean stopped at Gibraltar. During the fifth century B.C., Greek writers regarded the Straits of Gibraltar as the end of their world. The Carthaginians maintained a monopoly of the North Atlantic trade until the Romans took over Gades in 206 B.C. In 49 B.C. Gades received a Roman franchise from Caesar. The Roman trade to Britain lasted until about A.D. 400. During this time numerous Roman colonies were established in Portugal. The evidence of this long Roman occupation is still visible in both Britain and Portugal today in the decorated patches at the ends of some boats.

It might be argued that the boat end decorations could not have spread to both Britain and the Indian Ocean in Roman times from the Mediterranean, since in general an elaborately decorated end patch without oculus is found in Britain, while a plain-colored patch (with oculus at both ends) is found in India and Arabia. In Portugal boats with plain-colored patches at each end (with oculi on the bow only) are found almost side by side with elaborately decorated end patches (without oculi) along the northern coast. The elaborately decorated end patch without oculus is not found south of Lisbon.

A simple explanation is possible in the case of Portugal. The plain-colored end patches are the result of earlier Roman contact, while the elaborately decorated end patches without oculi are the result of later Roman contact. The fact that the Phoenicians definitely had a colony at Cadiz in Spain but that in both southern Spain and Portugal an oculus is

[39] T. C. Lethbridge, op. cit., Plate IV, p. 65.

[40] Ibid., p. 131, Fig. 26.

found only at the bow would seem to indicate that the Phoenicians never placed oculi at the sterns of their boats. If they did, the custom never spread west of Sicily. This certainly does not seem plausible in view of the fact that the Phoenicians (and later the Carthaginians) dominated the western Mediterranean and the Atlantic trade for such a very long period.

In the case of the Indian Ocean, there seems to be a reasonable explanation as to why the plain-colored end patches with oculi are found rather than the elaborately decorated end patches without oculi. Trade in the Indian Ocean seems to have declined after the third century A.D., but the trade with Britain flourished much longer. Roman archaeology shows that the first elaborately decorated boat ends without oculi do not appear on merchant vessels until about A.D. 200 in Italy, shortly after the Indian trade started to decline.

One might suggest that Hellenistic Greeks, rather than Romans (Roman subjects), were responsible for spreading the colored end patches with oculus to the Indian Ocean. In the first place, it does not seem that the Greeks ever used a plain-colored patch with oculus on merchant vessels. Also, the colored end patch with oculus is not found on the modern boats of Greece. Besides this, the historical evidence is against a direct Greek introduction of the oculus and colored end patch in Hellenistic times. Alexandria was founded in Egypt by Alexander the Great in 332 B.C. and was soon recognized as the cultural as well as the commercial capital of the Hellenistic world. The Ptolemies developed a definite policy towards maritime trade with the East. The start of the campaign was the opening of the port of Berenice in the Red Sea by Ptolemy Philadelphus shortly after 285 B.C., and then the founding of the port of Myos Hormos farther north in 274. Alexander originally reached India by land, but it was not until *c.* 120 B.C. that the Greek mariner Eudoxus finally made a voyage from the West by ship to India. Hippalus' discovery of the short route to India can be placed about 90 B.C.[41]

It was not until Roman times that vessels owned by Greeks were traveling to India in any quantity. This has been clearly indicated by Strabo who relates that as many as 120 vessels were sailing from Myos Hormos to India in the Principate of Augustus, whereas formerly under the Ptolemies only a few ventured to undertake the voyage and to carry on traffic in Indian merchandise. Therefore it was not until Roman times that Mediterranean vessels were in the Indian Ocean in strength. For almost three hundred years Roman vessels beat a path from the upper Red Sea to South Arabia and India. It is not surprising that the ships of these two

[41] G. F. Hourani, *Arab Seafaring* (Princeton: University Press, 1951), p. 24.

areas were influenced by the decoration of the obviously superior Roman vessels. (Early Indian literature refers to the 'beautifully built ships of the Yavanas.')[42]

One of the homogeneous features of the oculus in the Indian Ocean is the fact that it is and was found in general at both ends of vessels. The fact that oculi were placed at both ends of East African craft immediately struck Hornell, and led him to propose an Indonesian origin for the Eastern oculus. I have previously pointed out that Hornell ignored many instances of the duplication of oculi at each end of boats both in the Indian Ocean and the Mediterranean to arrive at an Indonesian origin of the Eastern oculus.[43]

By consistently using the term 'bow-patch,' Professor Quigley apparently disregards completely the fact that in some parts of the world oculi are placed at both ends of craft, while in others they are found only on the bows or on the stern. Professor Quigley feels that the oculus was invented somewhere in the Erythraean Sea and spread to the Mediterranean by Semitic sailors, either by an early Megalithic diffusion, by a Phoenician diffusion, or by both. If the Semites spread the oculus to the Mediterranean from Eastern waters, it is logical to suppose that they would have brought it into the Mediterranean in its original form—placed at each end of their boats.

It is thus interesting to note that none of the representations we have of Phoenician craft show oculi at both ends, although many of them show oculi placed on the bows. Likewise I know of no Carthaginian illustrations of boats with oculi at both ends. It is not until Roman times are reached that we first find an oculus placed at the stern. We must ask why the stern oculus does not occur until Roman times and why today in the Mediterranean oculi are placed at both ends of boats only in Italy and Sicily, in view of Professor Quigley's theory that Semites carried the oculus from the Indian Ocean to the Mediterranean in Phoenician times or earlier.

The term 'Semites' includes Babylonians and Assyrians, as well as Arabs. We have representations of Mesopotamian boats after 2000 B.C. showing only heads at both ends of the boats. No oculi are ever shown on the hulls of early Mesopotamian or Babylonian boats. The custom of placing heads at each end of boats spread eastward out of the Persian Gulf across India and the eastern mainland to the Oceanic islands. I have previously pointed out that this custom can still be detected today in

[42] Sir Mortimer Wheeler, op. cit., p. 133.
[43] R. LeB. Bowen, Jr., op. cit., pp. 13-14.

various forms of degeneration in India, the Celebes, and the Solomon Islands.[44] Assyrian sculptures show only animal heads on the ends of the boats.[45]

In Babylonian history frequent reference is made to sea voyages to Dilmun, Magan, and Melukhkha in the third millennium B.C. Bahrein Island has been identified with Dilmun, while scholars now feel that Oman is the province of ancient Magan and that Melukhkha was the Indus valley. Examination of the modern craft of the Persian Gulf and the Gulf of Oman shows that the ends of the boats preserve evidence (occasionally in the form of a geometric oculus) that heads were placed at each end.[46] Thus any oculi (always geometric designs) found on boats from the Persian Gulf and the Gulf of Oman originated with human sacrifice and represent the eye of the head. This design is always placed high on the stem and sternpost, not on the hull as in the Mediterranean.

There is no knowledge of any native coastal towns of any magnitude on the upper Red Sea before Greek and Roman times. Today the majority of the craft found in the upper Red Sea are modifications of either modern Egyptian or South Arabian vessels. Most of the craft are of the general *sanbuq* type. In the upper part of the Red Sea along the Saudi Arabian coast there is no evidence that either the oculus or the colored end patch have ever been used on Arab dhows. At Port Sudan we find degenerate triangles on the bows of *sanbuqs*, which have affinities with Aden and Massawa.

Going down the Arabian coast, it is not until one reaches Yemen that the green triangle (without oculus) is found at each end of boats. And at Aden we also find abundant evidence of the oculus with green end patches. Going east from Aden the triangle and oculus are found at Mukalla but not any farther eastward. Thus in Arabia proper the colored end patch with oculus is concentrated along a very limited part of the coast on the very southwestern corner. The main port of Yemen today is Mocha, the classical Muza. Aden is ancient Eudaemon Arabia. The ancient Hadhramaut port of Cane is now only a ruin heap, but it is less than a hundred miles west of Mukalla, which was founded in medieval times. Therefore the colored end patch and oculus motif is found concentrated today in an area which exactly corresponds with the coast of classical Arabia Felix. On the East African coast the center of the triangle and oculus is near Zanzibar. The *Periplus* tells us that in ancient times this coast was controlled by the Arabs of Yemen and that trade was brisk.

[44] R. LeB. Bowen, Jr., op. cit., pp. 30-31.

[45] C. Torr, op. cit., Fig. 9.

[46] R. LeB. Bowen, Jr., op. cit., pp. 31-34, Fig. 16, Plate 2.

Professor Quigley does not identify the inventors of the oculus in the Erythraean Sea, but if the Semites in South Arabia invented the oculus we should expect to find it preserved on the more primitive craft found along the South Arabian coasts of Yemen and Hadhramaut. When these craft are examined we find an almost complete lack of oculi.[47] Only on the sewn boat of South Arabia, which I have shown is probably of Indian origin, we do find carved (not painted) oculi, and since these are high on the stem and sternpost, they represent the original heads. These oculi are without painted end patches when used by the fishermen.[48]

However, when the same primitive dugouts and sewn boats are used by the mariners of Aden, they are usually decorated with green patches with oculi at bow and stern. I have previously discussed the apparent differences between the mariner and the fisherman: 'The sum total of the evidence in the Indian Ocean shows that fisherfolk cling most tenaciously to primitive forms of watercraft. Mariners, on the other hand, usually sail in craft that have been strongly influenced by foreign elements.'[49] Therefore we cannot escape the conclusion that the triangle and oculus have been borrowed by the South Arabians from some foreign influence, since the painted end patches are *always* used by mariners. It seems that the carved geometric oculi found occasionally on the ends of the stem and sternpost of sewn boats represent the eyes of heads formerly placed there, and this degeneration was undoubtedly influenced by the true oculus introduced into the Indian Ocean in Roman times.

In 'Maritime Superstitions of the Arabs' I did not emphasize the difference between the boat decorations used by the mariners and fishermen in South Arabia. But this was certainly one of the factors which conditioned my conclusion that the end patch and oculus used by the South Arabians was a later introduction. Both my previous articles, 'Maritime Superstitions of the Arabs' and 'Primitive Watercraft of Arabia' were taken from a much longer article on 'Arab Dhows of South Arabia.' The remaining material in this original article remains unpublished. The unpublished material concerns the dhows, the modern Arab merchant vessels, of Yemen, the Aden Protectorate, and Oman.

This unpublished material shows that in the Aden Protectorate the merchant vessel has lines which can be traced to Portuguese influence in the sixteenth century. In 'Primitive Watercraft of Arabia' I showed that the dugout *huri* was imported from India and had its sides raised in

[47] R. LeB. Bowen, Jr., 'Primitive Watercraft of Arabia,' THE AMERICAN NEPTUNE, XII (1952), 186.

[48] Ibid., p. 214.

[49] Ibid., p. 186.

Arabia. I also showed that the sewn boat had the same lines as the dugout with raised sides, and therefore it probably had an Indian origin. The Yemen merchant vessels, the *jelbah* and *zaruk*, also appear to have affinities with Indian boats. Thus the watercraft which appear to be native to South Arabia seem to have an ultimate Indian origin. Since there is no timber in South Arabia, all wood for shipbuilding has to be imported from India or Africa. In contrast to the boats of South Arabia, the watercraft of Oman have strong affinities with Mesopotamia, a fact which I have previously mentioned.[50]

It might be conjectured that the oculus of the South Arabians was derived from other Arab groups. However, we cannot find any such Arabs possessing the true oculus. Those geometric oculi that are now placed on some Persian Gulf and Gulf of Oman craft are apparently derived from animal heads which were formerly placed there, and this degeneration seems to have taken place since medieval times.[51] Hornell states that the origin of oculi cannot be traced to animal heads placed at boat ends.[52]

It might also be argued that certain of the carved geometric oculi found on South Arabian sewn boats have not degenerated from animal heads since mediaeval times, but rather represent the original oculus which was invented in the Indian Ocean. If we understand Professor Quigley's mechanism for the occurrence of the complex of the colored triangle and oculus in South Arabia, he feels that the colored patches at each end of the vessels were placed there at a later time *under* the original oculi. However, certain evidence indicates that such was never the case, but rather that a colored patch and oculus was superimposed on top of the original custom of placing heads on the boat ends.

This is shown by the *bum* of the Persian Gulf which carries a degenerate 'unpainted triangle' at both bow and stern as evidence of former colored patches and oculi, but there is evidence that heads were still carried on the end of the stem and on the sternpost. The stern head is now represented by a geometric oculus and the bow head by a painted black area.[53] It seems that the triangle and oculus of the *bum*, one of the greatest of all Arab voyaging vessels, was probably copied from the South Arabians.

It is thus seen that the centers of the use of the colored patch and oculus complex in the Indian Ocean are today located in India, South Arabia,

[50] Ibid., p. 221.

[51] R. LeB. Bowen, Jr., 'Maritime Superstitions of the Arabs,' THE AMERICAN NEPTUNE, XV (1955), 31-34.

[52] J. Hornell, 'Boat Oculi Survivals,' *Journal of the Royal Anthropological Institute*, LXVIII (1938), 348.

[53] R. LeB. Bowen, Jr., op. cit., p. 10, Fig. 5, p. 32.

and East Africa. It certainly seems to be more than a coincidence that these are the main areas where the Eastern trade with the Roman Empire was concentrated. Professor Quigley's hypothesis for an Eastern origin of the oculus contradicts the ethnological data that have been published over the years on the occurrence of such motifs on Eastern watercraft.

I originally suggested that the Arabs copied the colored end patch and oculus from either the Indians or the Romans (Roman subjects) sometime in the early centuries of the Christian era.[54] Two new bits of evidence make me now believe that the Arabs copied the colored patch and oculus directly from ships of the familiar Roman type. The first and most important piece of evidence is the identification of a statue of the goddess Isis done in Hellenistic style from the first-century B.C. ruins of Timna in South Arabia.[55] Besides Isis, it appears that certain Greek gods or goddesses may have found their way into ancient South Arabia.

During Roman times Isis was definitely regarded by at least some Greeks and by most Romans as the protecting goddess of the mariner. The discovery of an actual statue of Isis in South Arabia is certainly strong evidence that the ancient South Arabians were influenced to a considerable degree by Greco-Roman customs. The fact that Isis is definitely associated with the decoration of some Mediterranean ships in Roman times indicates that Isis may have had some significance to ancient South Arabian sailors too. Even though Isis was originally an Egyptian goddess, her occurrence in South Arabia cannot be laid directly to the ancient Egyptians, since the statue is done in Hellenistic style. Other material from this same site shows an Alexandrian affinity, so again we have evidence of influence from the Greek merchants of Alexandria, who were the Roman subjects most active in India.

The second piece of evidence is the fact that the Etruscans used blue-green patches at both bow and stern (Fig. 3). I was familiar with this Etruscan boat from Moll,[56] but I had not seen Pallottino's colored plate before. If the Romans derived the idea of placing colored triangles at both ends of their boats from the Etruscans, it is logical to suppose that at least some of the Roman triangles were green. Therefore the fact that the Arab end patches are green needs no special explanation. It seems that the Romans probably used patches of many colors, and that at least in the Mediterranean and in India red was very popular, if we can judge by

[54] Ibid., p. 22.

[55] B. Segall, 'Sculpture from Arabia Felix—The Hellenistic Period,' *American Journal of Archaeology*, LIX (1955), 207-214.

[56] F. Moll, op. cit., Plate B XI b, Fig. 111.

those examples surviving today. The Arabs settled on the green color because it had a religious significance in their pagan beliefs.

Professor Quigley suggests (pp. 196-197) that the Arabs originally had red end patches, and that they changed them to green at the advent of Islam. He argues that the red color of the patch was derived from the bloody sacrifice practiced at launchings and that when Islam discouraged the use of blood sacrifice, the Arabs changed the color of their patches from red to the sacred green of Islam. There are several fallacies in this reasoning. In the first place, there is no evidence that the red color of the patch originated in a bloody sacrifice, since the colored end patch originated in ancient Egypt where the color was blue or green or some other color. In the second place Islam did not effectively discourage the use of the blood sacrifice in relation to boats as Professor Quigley says (p. 197). The Moslem Arabs have preserved the use of the bloody sacrifice of animals on their boats up to recent times, as I pointed out.[57]

The color green did not become sacred to the Arabs in Islamic times as Professor Quigley implies. Certainly he should realize that such a thing as a sacred color must have had its origins in pagan times, and that it simply became part of the Islamic way of life. It is difficult to believe that any religious edict could force all boat builders to change the color of part of their boats. This might be possible in a very limited area, but it could not possibly be accomplished completely over several thousand miles of coasts from the central coast of South Arabia to East Africa. I have never heard of a Moslem prohibition on the use of the color red. A red banner forms the national flag of Oman and a red tarboosh is the national hat of Moslem Egypt. There has always been an Islamic prohibition on the use of images or any part of the body, but this has not stopped the use of oculi by Arab seamen. It is doubtful whether a prohibition of the use of the color red could be completely effective, if there ever had been one.

Outside of India, South Arabia, and East Africa, the other centers of the oculus in the East are Indonesia and China. Historical evidence indicates that the Indians began the peaceful penetration of the Indonesian Islands as early as the fourth century B.C., so it seems logical to suppose that the Indians introduced the oculus to Indonesia. It also seems that the origin of the Chinese oculus can be traced to India, for there are numerous historical references to trade connections between India and China from early times.

In relation to Poujade's law of diffusion of sails and hulls, Professor Quigley relates (p. 196) that the law explains the fact that 'the more effi-

[57] R. LeB. Bowen, Jr., op. cit., pp. 31-34.

cient lattice sail of the Chinese extended no farther than the boundaries of Chinese political domination.' One might not realize that Professor Quigley is referring to the Chinese lug sail with battens. Professor Quigley has apparently translated Poujade's French 'voile lattee' as 'lattice sail' without realizing that we have an accepted name for this sail. At any rate, this statement is quite incorrect, for I have previously shown that a form of the Chinese lug sail was known in India since the seventh century, inasmuch as the Ajanta ship showing oculi and an *artemon* has three Chinese lug sails on it (Fig. 2). Even today we find the tall rectangular Chinese lug sail with battens in India in the Maldive Islands and on the east coast of India.[58] This fact alone shows that Poujade's law of diffusion of sails is not consistent with the facts, since Poujade based the law partly on the Chinese lug.

Today in China this tall lug sail is centered around the mouth of the Yangtze and near Amoy. One finds colored patches on the bows of Amoy junks in association with oculi. Since I summarized all this information (which is factual and taken from other sources) in the article which Professor Quigley is attacking,[59] it is very difficult to see why he could obviously ignore this evidence and accept a theory of diffusion which contradicts the facts.

One interesting point is evident about the Chinese oculi. Hornell has related that the Chinese oculus occurs only upon 'sea-going craft' based in ports in southern and central China, and is never found in northern China.[60] Again we have specific evidence that the colored patch and the oculus is associated with mariners, and thus is undoubtedly a borrowed foreign custom. I have previously indicated that the complete lack of the oculus from the watercraft of Melanesia, Micronesia, and Polynesia points to a late date of introduction into the Eastern seas.[61] If Professor Quigley intends to support an early Mesopotamian origin of the oculus, he must explain why the Mesopotamian custom of placing heads on both ends of boats diffused eastward into the Oceanic islands, but the oculus did not get any farther than Java and the Asiatic mainland. He must also explain why the oculus is absent from all Babylonian and Assyrian ships.

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Professor Quigley (p. 194) makes a great deal of what he calls 'the close coincidence between the area where lateen sails were used and the area

[58] R. LeB. Bowen, Jr., 'Eastern Sail Affinities,' THE AMERICAN NEPTUNE, XIII (1953), 193-196.

[59] R. LeB. Bowen, Jr., 'Maritime Superstitions of the Arabs,' THE AMERICAN NEPTUNE, XV (1955), 45.

[60] J. Hornell, op. cit., p. 347.

[61] R. LeB. Bowen, Jr., op. cit., p. 47.

where oculi and colored bow-patches were used.' He gives me the dubious credit for this statement, which is taken from a discussion of the origin of the colored patch and oculus found in East Africa, and is the only place where I mention the lateen sail.[62] Certainly he should have realized that he cannot take a single sentence out of context and use it as a categorical assertion. This was meant to refer to the lateen sails found only in East Africa. Lateen sails have only spread to this area in modern times.

I mentioned the association between the lateen sails and colored end patches with oculi in East Africa only to show that very probably the colored patches with oculi were generally found on Arab boats. This is indicated by the fact that the lateen sail is found on the East African coast and in the Comoro Islands mainly on Arab craft. Without this means of identification it would be difficult in general to separate the craft used by the Indonesian, African, and Arab elements. Certain other groups in the Comoros used the Indonesian single outrigger and the Indonesian protosprit sail, and thus are probably of Indonesian ancestry.

Few people realize how limited the Arab lateen sail was in the Indian Ocean until relatively recent times. (I use 'Arab lateen' inasmuch as the Arabs do not use the true lateen sail, since all their lateens are quadrilateral with a short luff.) In the Rea Sea the indigenous sail up to the middle of the nineteenth century was a square sail made out of plaited palm leaves. About 1800 Bruce sailed out of Kosseir (Egypt) in the upper Red Sea in a sewn vessel that 'had one sail, like a straw mattress, made of the leaves of a kind of palm tree.'[63] It was fixed above and drawn up like a curtain. Niebuhr related that the Yemenites were 'very unskillful navigators, and use mats for sails.'[64] In the middle of the nineteenth century the vessels of the Yemen ports were still using similar sails, for Osgood related that they carried 'square mat sails.'[65]

I have previously shown that on the primitive fishing vessels of the South Arabian coast the common sail of the dugouts and the sewn boats is a square cotton sail.[66] Even in East Africa the indigenous sail appears to be a square mat sail, since the *mtepe* carried such a sail. Therefore the modern ethnological evidence indicates that the vessels of South Arabia and East Africa carried square sails, often made of matting, up until about a hundred years ago.

[62] R. LeB. Bowen, Jr., op cit., p. 15.

[63] J. Bruce, *Travels to Discover the Source of the Nile* (2nd ed., Edinburgh: Archibald Constable and Co., 1805), II, 107.

[64] C. Niebuhr, *Travels Through Arabia* (Edinburgh: R. Morrison and Son, 1792), I, 240, 242.

[65] Osgood, *Notes of Travel* (Salem, 1854), p. 252.

[66] R. LeB. Bowen, Jr., 'Primitive Watercraft of Arabia,' THE AMERICAN NEPTUNE, XII (1952), 217-218.

There is a twofold fallacy in Professor Quigley's association of the lateen sail with oculi and colored bow-patches, which he considers 'the key to the origin and diffusion of oculi' (p. 194). In the area where the colored end patches and oculi are prevalent today (South Arabia and East Africa), the indigenous sail was without a question of a doubt a square mat sail. On the other hand, the area where the lateen sail is evident in historical times (from the sixteenth century on) appears to be the Persian Gulf and the Gulf of Oman.[67] None of the boats in this area carries colored patches and oculi, and the few oculi found at the sterns only appear to have degenerated from heads since medieval times.

In my previous comprehensive discussion of the lateen sail, I pointed out that the origin of the lateen sail has been one of the more hotly argued topics in nautical history.[68] Professor Quigley (p. 195) has now added another hypothesis to all the others, for he believes that Semites introduced the lateen sail into the Mediterranean in the first millennium B.C. It does not seem to worry him that he has raised the first occurrence of the lateen sail in the Mediterranean by at least 1,000 years.

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In summary, it is seen that my theory for the diffusion of the oculus from the Mediterranean to the Indian Ocean in Roman times is conditioned by a number of factors:

(1) The occurrence of the Roman *artemon* on the seventh-century Ajanta ship and the ninth-century Boro Budur ships. This can only be explained by assuming that ships of the typically Roman type were actually sailing in the Indian Ocean in Roman times.

(2) Archaeological evidence from the Mediterranean shows that the stern oculus does not appear in the Mediterranean until Roman times.

(3) After Egyptian times the plain-colored end patch placed at both ends of boats does not again occur until Etruscan and Roman times.

(4) The homogeneous feature of the oculus in the Indian Ocean is the fact that it is found at both ends of double-ended vessels associated with colored end patches.

(5) Historical sources show that there was an enormous trade carried out by the Roman Empire with Arabia and India, and that vessels owned by Roman subjects entered the Indian Ocean in great numbers in the last part of the first century B.C. and continued to come until at least the third century A.D.

(6) A statue of the goddess Isis, known to be associated with the stern

[67] R. LeB. Bowen, Jr., 'Eastern Sail Affinities,' THE AMERICAN NEPTUNE, XIII (1953), 187.
[68] Ibid., p. 191.

of Roman vessels, has been discovered in first-century B.C. ruins in South Arabia.

(7) Certain forms of boat end decorations found today in Portugal and Britain are apparently the result of Roman maritime activity.

The evidence against an Indian Ocean origin of the oculus and later diffusion to the Mediterranean by early Mesopotamian peoples or by others during Phoenician times seems to be the following:

(1) The boat oculus has never been detected in early Mesopotamian, Bablyonian, or Assyrian art. The first appearance of the oculus in the Indian Ocean occurs in the seventh-century A.D. Ajanta paintings where it is shown at both ends of boats.

(2) It is known that the early Mesopotamians placed heads at the ends of their boats. This custom spread throughout the East and into the Oceanic islands.

(3) The oculus spread along the coast of the Asiatic mainland, but only reached the islands of Java and Sumatra.

(4) The occurrence of colored end patches with oculi at both ends of Arab boats is concentrated in South Arabia in Arabia proper.

(5) The oculus is found at both ends of vessels in the Mediterranean only in Sicily and in Italy. This shows that the custom of placing oculi at both ends of boats did not spread widely in the Mediterranean.

(6) The Phoenicians long controlled the western Mediterranean and the Atlantic trade. The fact that only the bow oculus is known in Spain and Portugal shows that very probably the Phoenicians never placed oculi at both ends of their craft.

(7) The occurrence of colored patches with oculi at both ends of Arab vessels is invariably associated with merchant vessels and mariners in South Arabia.

(8) The occurrence of geometric oculi on Arab boats appears to be a degeneration of the custom of placing heads at the ends of boats. This was probably influenced by the oculus which diffused from the Mediterranean in Roman times, since there is evidence that colored patches and oculi were used in conjunction with these degenerate head-oculi.

(9) The craft which can be considered native to South Arabia are probably of ultimate Indian origin.

(10) There is no relation between the areas where the Arab lateen sail was first found in the Indian Ocean and the area where colored end patches with oculi are found today.

Therefore it would seem that the weight of the historical, archaeological, and ethnological data favors a diffusion of the oculus from the

Mediterranean to the Indian Ocean in Roman times. There does not appear to be any evidence to support an invention of the oculus in the Indian Ocean. All of the factors listed above against an Indian Ocean origin of the oculus were taken into consideration in originally arriving at the conclusion that the oculus was introduced into the Indian Ocean from the Mediterranean during Roman times.

Castel del Rey, *an Early New York Privateer*

BY JAMES G. LYDON

BETWEEN 1692 and 1698 pirates from the Red Sea made the Colony of New York an entrepôt for their stolen goods. Soon the crown initiated a campaign against these illegal privateers and pirates and the new governor, Lord Bellomont, rapidly put a stop to their traffic. As a result the New Yorkers confined their interests to legal privateering during the course of Queen Anne's War, 1701-1713.

Among the vessels which cruised from the port during this war was *Castel del Rey*, a raider commissioned by the Dutch West India Company. She was under the command of Adrian Claver, who recruited a crew at New York in the fall of 1703.[1] The ship badly needed refitting and the captain's purse was bare after a poor cruise. Claver made known his plight and shortly struck a bargain with four New York merchants, David Provoost, Leonard Lewis, Johannes Thibout and Abraham Ketteltas. They, 'more out of compassion for him as a Stranger who nobody had notice of than out of any expectation of profit,' advanced him about £1,200.[2] In return Claver and a Martin d'Frees sold them one half of the privateer. Despite their philanthropic statements the New Yorkers were to receive one sixth of the booty from the cruise after the payment of the Queen's tenth and all other charges. For their part, Claver and his company were to fit and provide the privateer with all necessary provisions and ammunition. Both parties were bound by a £10,000 bond. By this means Claver outfitted and replenished *Castel del Rey* at what he considered an exorbitant price.[3]

In August of 1703 Claver was warned by the council not to sail until he had given bond not to take on board debtors, etc., and in October was or-

1 *Calendar of the Historical Manuscripts in the Office of the Secretary of State, Albany, New York*, Ed. E. B. O'Callaghan (Albany: Weed, Parsons & Co., 1866), II, 333. Henceforth cited *ENG MSS* II.

2 'Historical Manuscripts in the Office of the Secretary of State, Albany, New York,' XLIX, 180. Henceforth cited as 'HIST. MSS.'

3 Ibid., *ENG MSS* II, 331.

dered to put someone ashore from his ship.[4] Complaints were constantly lodged against privateer captains because they often overlooked the origins of those signing aboard their vessels. It was the common practice of deserters or escaped indentured servants to sign aboard a raider in order to escape from the colony.

Castel del Rey, carrying eighteen guns and one hundred twenty men, sailed aprivateering late in 1703.[5] Captain Claver and his men chose to cruise against the rich trade of the Caribbean area. The choice proved a wise one for they returned to New York in July of 1704, having accounted for three enemy vessels. Two of these, a sloop and a settee, were Spaniards taken off the coast of New Spain. Both carried rich cargoes of liquors, dry goods, silks and slaves and they arrived at New York, under convoy, on the twenty-second of July. A rumor that ten French prizes awaited entrance at the Hook proved false for only three prizes had been taken.[6] However, Claver's luck had changed; the voyage had proven fairly profitable.

During this war French raiders had continued their attacks upon British and colonial shipping along the North American coast. In 1701 the audacious D'Iberville had anchored at the Watering Place in the Narrows and remained there for almost a month charting the harbor entrance.[7] At the time of Claver's arrival in 1704 a French commerce destroyer was lurking off the Hook snapping up prizes. At the plea of the governor and council, *Castel del Rey* was manned with volunteers and put out after the enemy privateer. The Frenchman was sighted on 27 July, but a fearful crew refused to allow the angry Claver to attack and he returned to port in disgust. The colony now offered a bounty of 2,500 pieces of eight to encourage volunteers for *Castel del Rey* and two other vessels which were to be sent against the French despoiler.[8] On the twenty-ninth of July the raider was again sighted but escaped her pursuers. Evidently this show of force was sufficient for the New Yorkers returned to port and the French privateer seems to have left the area. As in the previous war French commerce destroyers appeared in the waters off New York from time to time. After many complaints to the crown, two ships of the line were stationed off that port and kept up a continual patrol of the coastal waters.

Upon his return to New York, Claver, made independent by his suc-

[4] *ENG MSS* II, 316, 317. *Calendar of Council Minutes, 1668-1773* (Albany: New York State Library, 1902), p. 188.

[5] H. M. Chapin. *Privateer Ships and Sailors, 1625-1725* (Toulon: G. Mouton, 1926), p. 217.

[6] *Calendar of Council Minutes,* p. 199. *Boston Newsletter,* 31 July 1704.

[7] *Documents Relative to the Colonial History of the State of New York,* Ed. E. B. O'Callaghan (Albany: Weed, Parsons & Co., 1853-1887), IV, 969.

[8] *Calendar of Council Minutes,* p. 199. *ENG MSS* II, 329. *Boston Newsletter,* 7 August 1704.

cess, strongly regretted his agreement with the New York investors. On the other hand, those 'compassionate' gentlemen were now very interested in their profits, which amounted to a fairly tidy sum. At first the Dutch captain tried to force them to change their agreement, by threats to take his prizes elsewhere for condemnation. However, the merchants took their case before the council and he was ordered to pay the agreed amount.[9] It appears that the crewmen then complained of the division of the spoils. In October of 1704 Captain Adrian Claver and his quartermaster, William Nazareth, appeared before the governor's council in connection with the prize money from their capture. Customarily the quartermaster of a privateer represented the crew members in the division of the prize lays, which accounts for the presence of Nazareth. This complaint was also settled by the legislators.[10]

The value of the three prizes brought to New York was £6,107.[11] Of this, ten per cent was assigned as the Queen's share in prizes; a like amount went to the Dutch West India Company which had issued Claver's commission and £305: 7: 0, or five per cent, was paid in customs duties. In addition, the court charges swallowed up another ten per cent, at least. Considering the huge charges levied on the prizes of a privateering vessel it is not surprizing that many men found piracy more attractive. £3,969: 11: 0 remained to be divided evenly between owners and crew. The New York investors received approximately £992: 7: 9 and thus they gained about an 82% profit in nine months. They also retained their one-half interest in *Castel del Rey*. The squabble over the spoils undoubtedly left hard feelings but another cruise would offer further chance of profit for all concerned.

Having satisfied the New Yorkers and paid his crew, Captain Claver overhauled his vessel and prepared to put out on another cruise. He applied for and received a New York commission and set sail in mid-December in consort with two sloops commanded by Captains DeWint and Van Lear.[12] By February of 1705 *Castel del Rey* was cruising with the privateer *Charles* of Boston, Captain Halsey. The New York vessel had a share in the prize ship which *Charles* sent into Newport on 27 May. The capture displaced one hundred and thirty tons and mounted eight guns. Her cargo was a valuable one; brandy, sugar, snuff, and oil. Previous to this, Captain Claver and Captain Halsey had joined company with Thomas Peniston

9 'HIST. MSS.' XLIX, 180-181. *Calendar of Council Minutes*, p. 200. *ENG MSS* II, 331.

10 *ENG MSS* II, 332. *Calendar of Council Minutes*, p. 201.

11 'HIST. MSS.' I I, 98. The duty on prize goods at this time was five per cent. Henry Crouch, *A Complete View of the British Customs* (London: J. Osborn, 1724), p. 5.

12 'HIST. MSS.' I., 9. *Boston Newsletter*, 4 December 1704, 15 January 1705 (NS).

in a New York sloop carrying seventy men. During the month of February the three had scoured the seas off Venezuela in search of prizes. They took several periaugers laden with cocoa and late in the month a small French ship. She had been bound for Europe from Martinique carrying a valuable cargo of island produce and was manned and sent for Bermuda to be condemned. Unfortunately on her way to those islands she was cast away on Abaco and both cargo and vessel were a complete loss.[13]

Later in the year *Castel del Rey* was at sea off Havana. In a flat calm Captain Claver put his men into the boats and they rowed the privateer up to a Spanish ship which mounted twenty guns. Within sight of the Spanish port they boarded and took her. The privateer lost a total of three killed and had twenty-five wounded, while eight Spaniards lost their lives in the battle. The passengers aboard the ship were put ashore in Cuba and Claver set out to escort the prize to New York. Three other New York raiders were in consort with *Castel del Rey* at the time of this capture. The four vessels with their three-hundred-ton prize reached port on 10 August 1705. Shortly after their arrival the reveling seamen aroused the anger of the sheriff and a riot broke out which was finally quelled by Royal troops, but only after the death of a British army officer.[14]

Castel del Rey remained in port refitting and signing on a new crew until late in that year. On her third cruise from New York she was to be commanded by Captain Otto Van Tyle. In November an order was issued which protected all volunteers for *Castel del Rey* from impressment. On 19 December 1705 she sailed. While setting out through the harbor the vessel went aground and Van Tyle sent several of her seamen ashore to get aid. Before they could return a heavy gale blew up. Rescue in the high winds and freezing weather was impossible. The ship settled until her deck was awash and the crew was forced into the rigging at the mercy of icy winds and drenching water. The following day when the sea had calmed rescuers reached the vessel to find that only four men remained alive. More than one hundred and thirty mariners had frozen to death, or, weakened by exposure, fallen into the water and drowned, within sight of shore. Eighty to ninety of the men were English and the remainder Dutch; almost all of them had been born in the colony. The loss of so many trained seamen was a heavy blow and cast a pall over the whole colony. The privateer was a complete wreck. Salvage efforts saw only her guns and some other furnishings reclaimed from the sea.[15]

[13] *Boston Newsletter*, 12 March 1705, 2 April 1705, 16 April 1705, 4 June 1705. (All dates new style.)

[14] *Boston Newsletter*, 20 August 1705, 1 October 1705, 29 October 1705.

[15] *Documents Relative to the Colonial History of the State of New York*, V, 59. *ENG MSS* II, 340, 341. *Boston Newsletter*, 24 December 1705.

Castel del Rey had, while sailing out of New York, taken or shared in some twelve prizes worth at least £10,000. For this era her career had been relatively successful. The laws controlling privateering were revamped and strengthened in the period 1692-1708. Privateering became a respectable business as a result of these changes and was so accepted by the British until American raiders wrecked havoc on their shipping during the Revolution. By the outbreak of Queen Anne's War the punitive laws against piracy had begun to show definite results. *Castel del Rey* offers an opportunity for comparison with the piratic privateers of Governor Fletcher's regime in New York. The significant point is that she was never involved in piratic activities. The prize list of this raider helped to indicate to New Yorkers that legal privateering could be profitable.

PRIZE LIST OF *Castel del Rey*

1st —— (Late 1703 to 22 July 1704) —— Adrian Claver, Capt.

Prize	*Taken*	*Cargo*	*Into*	*Value*
Spanish sloop	off	100 pipes Canary wine, 30 pipes palm wine, 900	N.Y.	
Spanish settee	New Spain	jars of oil, 124 bales of dry goods and silks, 30 slaves	7/22/04	£6,107 (For all three)
French vessel				

(Plus 833 pieces of eight for cruise against French privateer.)

2nd Cruise —— 12 December 1704 to 27 May 1705 —— Adrian Claver

				Est. Value
several periaugers	2/05	cocoa		£200 ( )
(In consort with *Charles* and Captain Peniston.)				
French ship	2/05	sugar, etc.	castaway	
(In consort as above)				
Ship 130 t 8 guns	4/05	Brandy, sugar, paper, snuff and oil	Newport 5/27/05	£2,000 (½)
(In consort with *Charles*)				
Spanish ship 300t, 100men,	7/05	350 pipes of wine and brandy, 400 jars of oil, 400 baskets of raisins,	N.Y. 8/10/05	£1,500 (¼)

20 guns. 12 bales dry goods.
(In consort Captains Gincks, DeWint and Willoughby)

3rd Cruise —— 19 December 1705 —— Otto Van Tyle

(Castaway on 19 December 1705 in New York harbor.)

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American Steam Navigation in China, 1845-1878

PART VI

BY EDWARD KENNETH HAVILAND

VIII. British and Other Foreign Owners of American Ships

American-built steamers of all types sent to China had by 1860 established such a reputation for efficiency and economy and had shown such an adaptability to conditions there, that they were generally preferred to all others.[595] This preference continued for perhaps half a dozen years, after which the durability of iron and steel steamers, which could be built more cheaply in British yards, caused the latter to be favored. But the influence of American ship types was lasting and its effects can be seen to some extent down to the present day.

Of the British houses in China which operated American-built steamers, the most prominent was Dent and Co., the chief British rival of Jardine, Matheson and Co. Dent's first American-built steamer was *Yangtsze*, a seagoing wooden side-wheel steamer of 1,003 tons, launched by Thomas Collyer from his yard at the foot of 43rd Street, New York, on 24 November 1856.[596] She appears to have been built as a venture of Captain Thomas W. Dearborn and associates. He had been connected with the China trade since 1840 and had previously been interested in *Confucius*, which he took to China in 1853.[597] In the first document of *Yangtsze*, dated 13 May 1857, Captain Dearborn is listed as owner and master and in a second register of the same date Theodore Dehon of New York is given as owner. Morrison states that she was built for Russell and Co.,[598] and it may be that when she was laid down her owners contemplated selling her to Russell and Co., or at least having them operate her. If so, it

[595] 'Superiority of American Steam Boats in China,' *China Overland Trade Report* (same as *OTR*), 27 February 1860. This is the article quoted by Dayton, op. cit., pp. 379-382. Cf. also the British consular trade reports quoted by Allen and Donnithorne, op. cit., p. 129.

[596] *New York Herald*, 25 November 1856.

[597] *New York Herald*, 7 April 1857.

[598] J. H. Morrison, op. cit., p. 599.

is probable that the second Anglo-Chinese war—then in progress—dissuaded Russell and Co. from undertaking the project. In any case, Captain Dearborn seems to have arranged with Dent and Co. to operate the steamer when she reached China. *Yangtsze* was intended primarily for carrying silks, opium, treasure, a few passengers and the news—particularly the last—between Hong Kong and Shanghai, in advance of the regular mail, a function she performed with regularity and success.[599] As a protection, she was pierced for four guns and had a swivel gun in her bow.[597] Under Captain Dearborn she cleared New York on 15 May 1857, dispatched by Thomas Dehon, left Bombay on 31 October, and arrived at Hong Kong on 22 November, consigned to Dent and Co.,[600] who operated her regularly on the coastwise route between Hong Kong and Shanghai for more than three years. During this period Captain Dearborn continued in command and the steamer flew the American flag, Theodore Dehon being listed as her registered owner until July 1861 when Captain Dearborn was again the nominal owner. But it would appear that Dent and Co. were the actual owners. At least they were so regarded.[601]

On 22 February 1861, *Yangtsze* left Shanghai in company with the ships of Admiral Sir James Hope's expedition and having as passengers representatives of Dent and Co. at Shanghai, arriving at Nanking on the twenty-sixth. On the ground that the time of those on board was valuable, she remained there only one day and then proceeded up the river to establish agents at the new treaty ports. *Yangtsze* thus had the honor of being the first merchant vessel to reach Hankow,[602] and it was said that Mr. Webb received from the Viceroy some of the favors which were intended for Admiral Hope.[601] On her return she arrived at Shanghai on 16 March, and a few days later left for Tientsin. At this time the steamer was still under the American flag. Later in the spring she was reboilered at Whampoa,[603] and toward the end of the year was transferred to the British flag and entered the Yangtsze trade, where she was usually employed after that, although she made occasional voyages to Hong Kong and to Japan. Late in 1863 Dent and Co. sold *Yangtsze* to the Tycoon of Japan for $145,000, with delivery in December of that year.[604] It would appear

599 *Journal of the Franklin Institute*, LXXI (1861), 167-168.

600 *NYH*, 16 May 1857; *CM*, 26 November and 3 December 1857.

601 Thomas W. Blakiston, *Five Months on the Yangtsze* (London, 1862). Blakiston was a captain in the Royal Artillery and was attached to Admiral Hope's expedition. See also footnote 599.

602 The first merchant vessel to reach Hankow on a commercial voyage was *St. Theodosius*, which arrived there in April 1862.

603 *OTR*, 14 April 1861.

604 *NCH*, 23 January 1864. *GL*, *NCH*, 27 April 1867. *Commercial Reports from Her Majesty's Consuls in China and Japan, 1864* (London, 1865), p. 286.

from the statement that the new *Yangtsze* (see under J. M. Batchelder above) received the boilers of the old *Yangtsze*, that the latter vessel was gone by 1868.

When the Yangtsze was opened to regular trade in April 1861, Dent and Co. placed in service on the river the steamer *Governor General*, which they had acquired that year at Hong Kong from Australian owners. She was the third merchant vessel (not counting *Yangtsze*) to reach Hankow after the river was opened to trade, arriving a few days after *Fire Dart*.[605] *Governor General*, which a contemporary account described as 'old but still serviceable,' was a wooden side-wheel steamer of 762 tons which had been built by W. H. Webb at New York in 1848 as *New Orleans*. In February 1850 she went to the west coast of America and operated for a while between San Francisco and Panama. In 1853 she went to Australia and served on that coast, first for the Melbourne S. P. Co. and later for the Australian S. N. Co., until purchased by Dent and Co. early in 1861.[606] After a few years of service on the Yangtsze,[607] *Governor General* was converted to a hulk and as such sold to the Shanghai S. N. Co. following the failure of Dent and Co. in 1867. By 1871, she had become too infirm for even that use and the S. S. N. Co. replaced her by the former P. and O. steamer *Ganges*.[608] *Governor General* was broken up and her register closed on 22 May 1872.

In 1863, Dent and Co. added to their fleet the composite paddle steamer *Fusiyama*. Her iron frame and machinery were sent out from America in the latter part of 1862 and the ship was set up and completed at Yankin, near Shanghai, by Collyer and Lambert, under the supervision of Captain Dearborn, entering service about the end of 1863. As mentioned before, Dent and Co. sold *Fusiyama* to the Shanghai S. N. Co. in the latter part of 1866.

In 1864, John Dent of Dent and Co. had built by Jeremiah Simonson at Greenpoint, Long Island, the seagoing wooden side-wheel steamer *Yesso* of 973 tons gross, essentially an enlarged copy of *Yangtsze*. When *Yesso* was launched on 25 June 1864, contemporary accounts stated that she was built for Captain Thomas W. Dearborn,[609] who appears as her

[605] G. H. Preble, op. cit., p. 226.

[606] Cf. J. H. Kemble, op. cit., p. 236; W. Lawson, op. cit., pp. 49-50; *BD*.

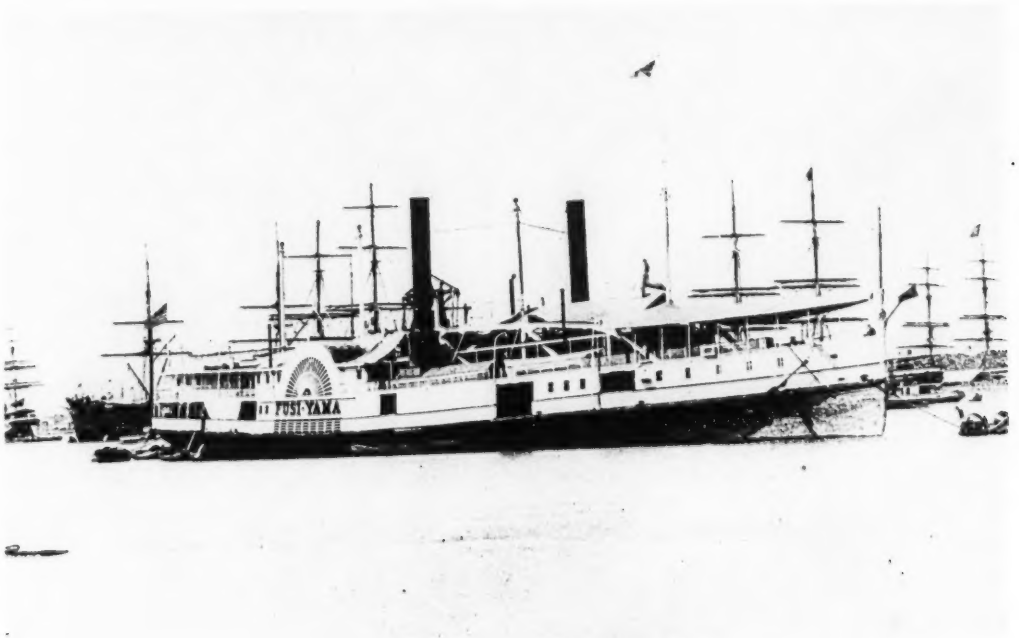
[607] *Governor General* was trading on the Ningpo route at least as late as March 1864 (*NCH*, 5 March 1864).

[608] *NCH*, 7 July 1871. According to *CRS*, Shanghai, the S.S.N. Co. purchased *Ganges* on 24 August 1871.

[609] *NYH*, 24 June 1864.

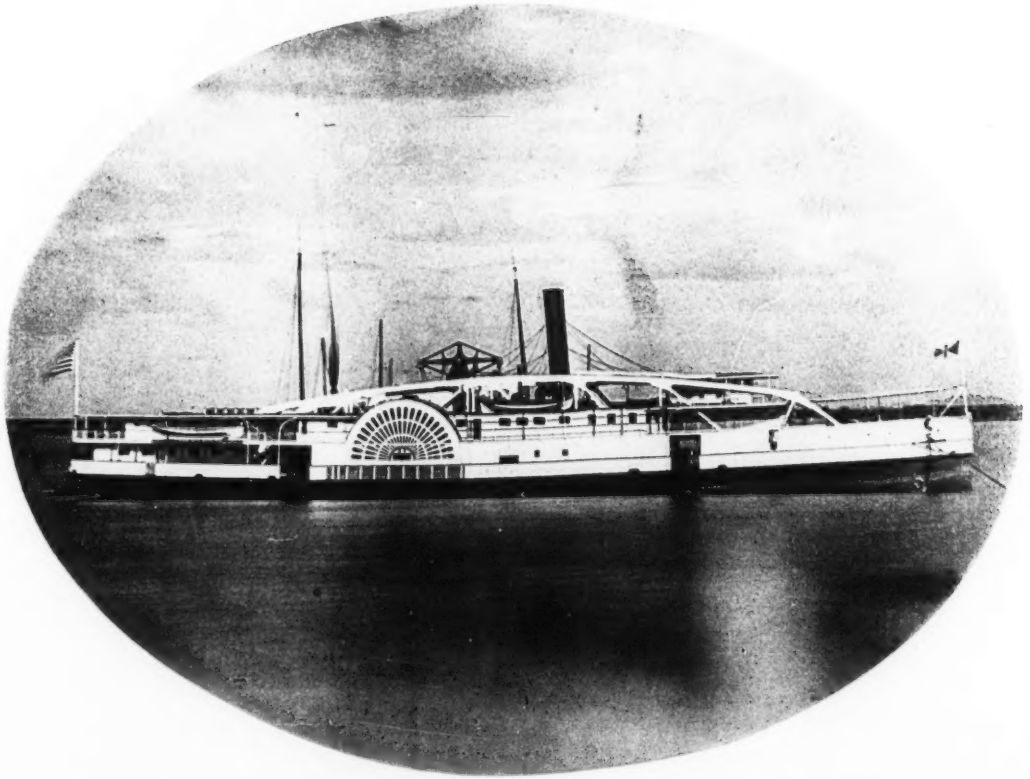
Lyeemoon, 1859 (left), and *Yangtsze*, 1857 (right). Dent and Company

Courtesy of the Peabody Museum of Salem



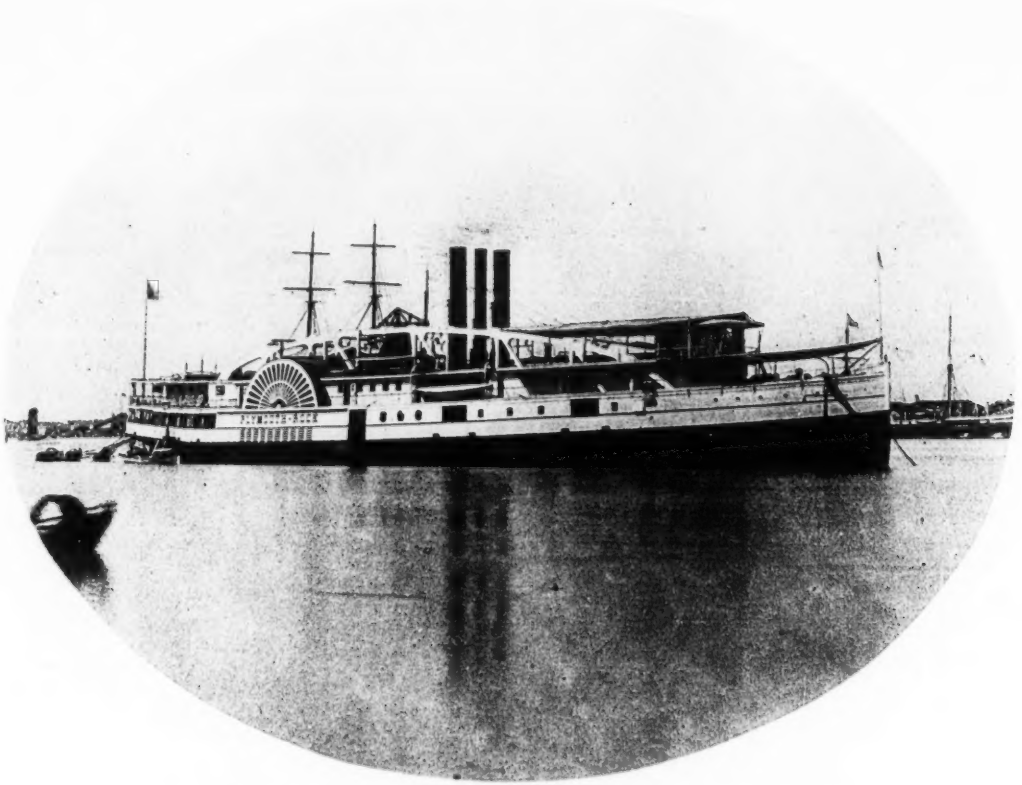
Fusiyama, 1863. Dent and Company; later owned by Shanghai Steam Navigation Company

Courtesy of the Peabody Museum of Salem



Moyune, 1863. Shanghai Steam Navigation Company; formerly owned by Fletcher and Company

Courtesy of the Peabody Museum of Salem



Plymouth Rock, 1863. Formerly *Foong Shuey*; Shanghai Steam Navigation Company

Courtesy of the Peabody Museum of Salem

owner in *American Lloyd's,* but it is clear that he was acting primarily as agent of Dent and Co., although, of course, he may himself have had some financial interest in the steamer. Under Captain R. H. Cairns *Yesso* left New York, flying the British flag, on 16 December 1864, arriving at Hong Kong on 14 March 1865. She was employed by her owners in the coasting service between Hong Kong and Shanghai and sold in 1866 to Douglas Lapraik and Co.,[610] who continued her on the same route. She was extensively repaired in 1874 and again in 1877, following the explosion of her foremost boiler just after her arrival at Hong Kong early on the morning of 22 November 1877, by which accident 87 lives were lost. Under Captain Ashton *Yesso* left Swatow on the evening of 17 March 1879 and at 11 P.M. the same day struck on the White Rocks, Lamock Island, about 30 miles E.N.E. of Swatow, and soon became a total wreck. All hands were saved, with the exception of a Chinese boy about seven years old, who was washed off the rock into the sea, but the mails were lost.[611]

In 1865, Dent and Co. had built the composite side-wheel steamer *Hirado,* 1,294 tons, approximately a sister of *Fusiyama* and, like the latter, set up by Collyer and Lambert at Yankin. *Hirado* ran her trials on 14 December 1865 and a week later set out on her first trip up the Yangtsze. She operated between Shanghai and Hankow until sold, along with *Fusiyama,* to the Shanghai S. N. Co. toward the end of 1866.

In a letter to P. S. Forbes, dated 19 June 1865, George Tyson, then president of the Shanghai S. N. Co., stated that 'Dent and Co. are anxiously hoping that the steamer building by Dearborn won't come to China.'[612] This was *Paou Shun* (or *Pau Zung*), an ocean-going side-wheel steamer of 1,691 tons, built at Greenpoint by Jeremiah Simonson, effectively a still larger edition of *Yangtsze.* She was launched on 18 March 1865 and in her first register, dated 7 October 1865, Thomas W. Dearborn is given as owner. On 9 October 1866, she was reregistered as owned one half by Thomas M. J. Dehon and one half by Pickering Clarke, both of New York. This was the usual pattern of ownership of steamers built in America for Dent and Co. But the latter had gotten into financial difficulties and did not take up *Paou Shun.* On 9 November 1866, she was registered in the name of the North American S.S. Co., William H.

[610] According to her document, the shares in *Yesso* were transferred from John Dent to John Stewart Lapraik on 25 July 1868, but the steamer seems to have been sold earlier.

[611] *NCH,* 28 March 1879.

[612] K.-C. Liu, loc. cit., II, 178.

Webb, President. Her new owners added to her superstructure, raising her gross tonnage to 2,144, and renamed her *Nevada*. After rebuilding, she left New York on her trial trip on 9 May 1867 and was then placed in her owners' Atlantic coast service, being shortly transferred to the Pacific coast. From 1871 to 1873, she was operated by the California, New Zealand and Australia S.S. Co., in which Webb was also interested, and in the latter year was purchased by the Pacific Mail S.S. Co. for their Shanghai-Yokohama service, as will be described later.[613]

Dent and Co. failed on 1 January 1867. The immediate cause of the failure appears to have been the failure of Overend, Gurney and Co., the London bankers,[614] but unwise speculations on the part of some of Dents' partners were said to have contributed.[615] In addition to the steamers mentioned above, Dent and Co. operated a number of others, but the latter, having no American connections, will not be discussed in the present paper.[616] After the failure of Dent and Co., Alfred Dent established a new firm of the same name, but this company does not seem to have engaged directly in shipping—certainly not with American ships, although John Dent, senior partner of the old company at Shanghai, was a director of the Shanghai S. N. Co. in the 1870's, retiring from the board in 1875.

Another British company owning American-built ships was Lindsay and Co., an old firm which had been organized by former servants of the East India Company. B. Aymar and Co. appear to have represented them in New York and most of Lindsay and Co.'s steamers are to be found in *American Lloyd's* in the name of Aymar and Co. Many, if not all, of the Lindsay steamers constructed in America were built under the supervision of Captain Henry W. Johnson.

The first of these was *Fire Cracker*, a wooden side-wheel steamer of sound type with a tonnage of 1,040, built by John Englis under Captain Johnson's direction. She received her first register on 28 May 1862, Captain Johnson being listed as owner, and under his command left New

613 For further information on *Nevada*, see J. H. Kemble, op. cit., p. 235, and Erik Heyl, op. cit., pp. 287-288.

614 See G. C. Allen and A. G. Donnithorne, op. cit., p. 35.

615 Basil Lubbock, *The Opium Clippers* (Boston, 1933), p. 373. This author gives 9 July 1867 as the date of the failure.

616 Best known of these were the screw steamer *Cosmopolite* of 699 tons gross, built at Bordeaux in 1859, and the iron paddle steamer *Ly-ee-moon* of 753 tons gross (later of 991 tons gross), built at London in 1859. A description of *Ly-ee-moon* is given in *Journal of the Franklin Institute*, LXXI (1861), 166-168. Both steamers were sold to the Japanese, *Ly-ee-moon* in April 1863 and *Cosmopolite* in October 1864. The former was resold British, converted to screw and, after several changes of ownership, lost on Green Cape, Australia, on 30 May 1886. The latter was renamed *Kagoshima Maru* and was converted to a hulk some time prior to 1882.

York on 7 June 1862,[617] making a voyage of 52½ days to Singapore.[618] *Fire Cracker* arrived at Shanghai from Hong Kong on 7 September 1862 and was placed in her owners' service on the Yangtsze, where she continued until wrecked on Li Rock, 50 miles above Kiukiang, due to low water, on 2 February 1864.[619] Captain Pendleton was in command at the time. The wreck was sold at auction on 26 March and realized Tls. 300. A week or so after that, the water was reported over her hurricane deck. During the summer a wrecking steamer contrived to salve the engine, which was sent to New York and, after rebuilding by the Quintard Iron Works, installed in the Hudson River steamer *City of Troy*.

In 1862 John Englis built for Aymar and Co. the wooden screw steamer *Mary A. Boardman* of 483 tons. In her first register, dated 6 August 1862, Joseph Gaillard, Jr., who appears to have been associated with Aymar and Co., is given as owner. But contemporary accounts state that she was intended for service on the coast of China and it is probable that she was built for Lindsay and Co. However, she never went out to China, but was chartered to the U. S. A. Q. M. Department much of the time between 5 August 1862 and 29 August 1865, at first by Aymar and Co. and toward the last by Snow and Burgess, at rates which were at first $450 per day, when tonnage was scarce, and finally $171 per day. Following her war service, *Mary A. Boardman* was placed in the coastwise trade, but was lost by stranding on Romer Shoals, 8 January 1866, Morehead City to New York.[620]

In 1863, John Englis and Son built for Lindsay and Co. the wooden screw steamers *Fire Flash* of 202 tons and *Fire Rocket* of 366 tons. Both were renamed before documentation, *Fire Flash* becoming *Pluto* and *Fire Rocket*, *Vulcan*, and were registered on 6 November 1863, with Joseph Gaillard, Jr., as owner. Under Captain Isaac Preble, *Pluto*, flying the British flag, left New York for Shanghai on 28 November 1863, arriving at Hong Kong on 9 June 1864.[621] *Vulcan*, also under the British flag and with Charles G. Bunker as master, left New York for Shanghai on 15 November 1863, arriving at the latter port on 5 May 1864.[622] Both steamers are listed as tugs plying for hire at Shanghai with Lindsay and Co. as agents as of August 1864, their captains being those who brought them

[617] *Scientific American*, 21 June 1862.
[618] J. H. Morrison, op. cit., p. 511.
[619] *BSL*, 26 November 1862; *NCH*, 6 February 1864.
[620] *BSL*, 20 January 1866; *SBF*, March 1954.
[621] *BSL*, 23 December 1863 and 31 August 1864.
[622] *BSL*, 23 December 1863 and 20 July 1864.

out. Under Captain Pendleton, *Vulcan* left Shanghai for Hong Kong on 11 April 1865.[623] This is about all that is known of their movements after they reached China, the situation being complicated by the fact that there were other steamers of the same name operating in Chinese waters at this period.

A larger screw steamer built about the same time for Lindsay and Co. was *Promise*, a wooden vessel of 590 tons constructed by J. B. and J. D. van Deusen at New York in 1863. In her first register, dated 18 February 1864, Joseph Gaillard, Jr., is given as owner and in *American Lloyd's* for 1864 she is listed in the name of Aymar and Co. Under Captain A. Bain, *Promise* left New York for Shanghai on 26 February 1864,[624] arriving at the latter port in July. On 3 November 1864, *Promise*, still under Captain Bain, collided with and sank the French bark *Général Meslin* near Shanghai, without much damage to herself. Her owners at the time were the Shanghai and Tientsin Navigation Co., the steamer being on her third trip to Tientsin at the time of collision.[625] On 5 January 1865, *Promise* left Shanghai for Nagasaki.[626] Toward the end of the year she was sold in Japan and became *Yokohama Maru*.[627] Walsh, Hall and Co. had an interest in her and, as stated previously, she was sold to a Japanese in 1873.

Largest and last of the river-type steamers built in America specifically for service in China and sent out under their own power was *Fire Queen*, a wooden side-wheel steamer of 3,801 tons gross, built for Lindsay and Co. under the supervision of Captain H. W. Johnson in 1864 by John Englis and Son. *Fire Queen* was on Lindsay's Yangtsze line until they failed in the spring of 1865,[628] and was sold in the latter part of 1865 to the Shanghai S. N. Co., in connection with which she has already been treated.

A third British company operating American steamers in China was Fletcher and Co. Their one large steamer was *Moyune*, 1,224 tons, built in New York, apparently for them or with the expectation of selling her to them. They operated her on the Yangtsze until about July 1865, when, following the failure of the owners,[629] she was sold to the Shanghai S. N.

[623] *NCH*, 15 April 1865.

[624] *BSL*, 2 March 1864, where her name is given as *Primrose* (apparently an error).

[625] *NCH*, 31 December 1864. *Log Shanghai Pilot Service*, p. 45.

[626] A. Heard and Co.'s circular, Shanghai, 7 January 1865.

[627] *NCH*, 9 December 1865.

[628] F. D. Williams to his wife, Hong Kong, 28 April 1865 (*FDWL*).

[629] See F. D. Williams to his wife, Hong Kong, 1 April 1865 (*FDWL*); also "Butterfield & Swire, 1867-1957," *The Blue Funnel Bulletin*, January 1957.

Co., as described above under the latter. Fletcher and Co. also had the small steamer *Yuen-fah* set up for them by Thomas Hunt and Co. in 1863, and in addition owned or operated other steamers, but all were small and none seems to have had any American connection, so we do not treat them in the present paper.

David Reid operated, and presumably owned, the steamer *Columbia* during 1862, at a time when, as one writer expressed it, 'every other house in Shanghai had a steamer on the river.' *Columbia*, a seagoing wooden side-wheel vessel of 777 tons, had been built in 1850 by Westervelt and Mackay for the Pacific coast service of the Pacific Mail S.S. Co. Her sale to owners in China was announced on 11 March 1862 and under Captain Shuttleworth and flying British colors she left San Francisco for Shanghai on 18 April 1862, arriving at the latter port on the first of June.[630] On 13 June, *Columbia* left for Hankow and continued in service on the Yangtsze through July. Apparently, the results of her trading were not satisfactory, as on 8 August she was dispatched to Newchwang. She returned on the nineteenth and then made a trip to Japan, arriving back in Shanghai on the third of October. After three weeks in port, *Columbia* left Shanghai for Nagasaki on 24 October 1862. Shortly before she had reverted to the American flag, with Captain E. M. Neal as master and registered owner. She arrived at Nagasaki on the 27th and was sold on the 31st to the Japanese government for Mexican $80,000 to be used as a man-of-war.[631]

While the foreign-owned American-built steamers trading in China waters in the period covered by the present paper were mostly British, aside from those sold to the China Merchants S. N. Co., there were a few under other flags.

Alexander II was a wooden screw bark of 331 tons gross, built by William H. Webb at New York in 1855 as *Astoria*, apparently for Russian owners, and renamed at Sitka the following year.[632] On 23 April 1868, she was redocumented as the American steamer *Alexander*, owned by Hutchinson, Kohl and Co. and registered from San Francisco, consequent upon the purchase of Alaska, but after a time reverted to the Russian flag and traded for some years between Far Eastern and North Pacific ports un-

[630] *NCH*, 7 June 1862. For further information on *Columbia*, see J. H. Kemble, op. cit., p. 220. He gives 17 April as the date of her leaving San Francisco.

[631] *CRS*, Shanghai, Nagasaki. *NCH*, 1 November 1862, says she left for her final trip to Japan as a British vessel under Captain Shuttleworth, but this seems to be an error. *BSL*, 14 February 1863, gives the date of her sale as 14 November.

[632] *Lewis and Dryden*, p. 140. She was transferred from the American to the Russian flag on 29 November 1856 (*Lytle List*).

der the ownership of the associated Philippeus and Co. (or Hutchinson, Kohl, Philippeus and Co.) of Vladivostock.[633] She was rebuilt in 1879 and owned by the latter firm when she visited San Francisco in 1888. She was later registered from Honolulu and is out of the register books about 1895.

An enumeration of the American-built steamers with foreign owners in service in the Far East during the period covered by the present paper calls for at least a brief mention of *Dang Wee*, *Kuroda* and *Capron*, although it is not sure that the latter two steamers actually traded to China at any time.

Dang Wee was the former U.S.S. *Unadilla*, which had been built for the Navy in 1861 and was sold out of service at Hong Kong in October 1869.[634] She was purchased by the government of Annam for use as a warship, though it is probable that she was used for commercial purposes as well. In the fall of 1870 she was in collision during a typhoon at Hong Kong with the big steamer *Delaware*.[635] Beyond this, not much is known of her later history.

Kuroda, 644 tons gross, and *Capron*, 374 tons gross, were wooden screw steamers built by C. and R. Poillon, Brooklyn, for the Japanese government, which planned to use them in coastwise service and as training ships for the Japanese merchant marine.[636] The Poillons were noted for the quality of their workmanship and these two steamers, judging by their long lives, furnished no exception. *Kuroda*, renamed *Genbu Maru* (*Gembu Maru*), and *Capron*, renamed *Karafuto Maru* and later *Kiorio Maru*, were acquired by the Nippon Yusen Kaisha in its early years and disposed of about 1897, at which time the latter steamer was renamed *Kepuron Maru* (probably a reversion to her original name). *Genbu Maru*, then owned by Yamagata Yuzaburo, was wrecked, 17 February 1907, near Higashi Tori, province of Alutsu. *Kepuron Maru*, while owned by K. Takahashi, foundered at Yesashi, Oshima, Hokkaido, on 14 December 1912.

IX. Miscellaneous American Tugs and Small Steamers in China

There were more than a score of tugs or small steamers more or less regularly engaged in towing in China in the period 1855-1878 that ei-

[633] There was a steamer *Alexander* trading to Shanghai in 1873, consigned to A. Heard and Co., quite probably this ship.

[634] *History of the Union and Confederate Navies*, II, 1, 228.

[635] *NCH*, 4 October 1870.

[636] *Nautical Gazette*, 22 June 1872. The later histories of these steamers are taken from *Lloyd's Register* and *Lloyd's Register Wreck Returns*.

ther were built in the United States or flew the American flag or had American owners. All were comparatively small and in most cases the information regarding them is very limited. The following have already been treated in the present paper: Under Russell and Co. or the Shanghai S. N. Co., *Firefly, Ta Yung* and *Tsatlee*; under Augustine Heard and Co., *Meteor, Washington, Bunker Hill* and *Little Orphan*; under H. Fogg and Co., *Martin White, Anna* and *Elfin*; under Lindsay and Co., *Pluto* and *Vulcan*; and under Wheelock and Co., *Hercules*.

One of the earliest as well as one of the largest of the American tugs in China was *Underwriter*, a wooden screw steamer of 433 tons, which had been built at Philadelphia in 1854 by William Cramp and Sons to the order of William P. Williams and Co.[637] As a new ship, she was sent to the Pacific coast for the account of Henry Meiggs, being intended for his lumber mill service at Mendocino, but before her arrival he had become involved in financial difficulties and left for South America,[638] where he later made his reputation as a railroad builder.[639] *Underwriter* lay idle for a while and was sold by the United States Marshal in the fall of 1855. She was registered at San Francisco on 19 November 1855 with Edward Gilson listed as owner. This document was surrendered at San Francisco, 6 February 1856, and on the seventeenth *Underwriter*, under Captain Watson, left San Francisco in ballast, arriving at Hong Kong on 25 April, consigned to Jardine, Matheson and Co.[640] Presumably they were acting as agents or else she was acquired as a speculation, as in an advertisement dated 5 May 1856 they were offering her for sale. Evidently there were no purchasers, in China at least, and on 3 July 1856 *Underwriter* sailed from Hong Kong, still under the American flag and with Captain Watson in command, for Calcutta with miscellaneous cargo.[641]

At least three tugs were built at East Boston for Captain Daniel Cavanagh for service in China and he appears to have had a financial interest in each of them.[642] The first of these was *Bunker Hill*, built at East Boston in 1861 by G. and T. Boole. In her first enrollment, dated 19 June 1861, Captain Cavanagh is listed as owner and master. On 25 September following, *Bunker Hill* was registered in the name of Thomas Cunningham of Charlestown, Massachusetts, as owner, with Captain Cavanagh still as master. The latter took her out to China a couple of weeks later, as de-

637 G. H. Preble, op. cit., p. 464.

638 Benj. C. Wright, op. cit., p. 43. Wright says that *Underwriter* burned in China, but the dispositions given by him are not reliable, and in many cases demonstrably incorrect.

639 C. M. Wilson, *Empire in Green and Gold* (New York, 1947), pp. 41-43.

640 *CM*, 1 May 1856.

641 *CM*, 3 July 1856.

642 His name appears also as Cavanaugh, Cavignagh.

scribed earlier under Augustine Heard and Co. *Woosung* and *D. Cavanagh* were built in 1864. *Woosung*, 161 tons, left Boston for Shanghai on 11 November 1864 under Captain J. H. Hallett and arrived on 18 July 1865, after a long delay at Singapore where she arrived on 22 March and left on 12 June.[643] A year or two later she was listed with John Forster (or Foster) and Co. as agents and marked 'laid up.'[644] *D. Cavanagh* under Captain Cavanagh sailed from Boston for Singapore on 31 December 1864 and went missing.[645]

Frazar and Co. was a well-known American house in China, but never engaged extensively in steam shipping. However, in the 1870's they were listed as agents of an American tug called *Samson*,[646] 81 tons gross, which had been built at Shanghai in 1864. Hunt and Co. had been listed as her agents in 1865 and Captain Patridge as agent in 1867. She was later on the fleet of the Shanghai Tug Boat Co., Ltd. (see below) and was condemned in 1889 and broken up.

The Shanghai Tug and Lighter Co. was a joint-stock enterprise closely associated with Russell and Co. The Shanghai S. N. Co. owned Tls. 4,250 of the tug company's stock. Unfortunately, such of the company's reports as are available do not throw much light on their ships. As of 1867, they had the British tug *Fei Yuen* of 50 tons. Some time following the sale of the S. S. N. Co., the Shanghai Tug & Lighter Co. seems to have been absorbed into the Shanghai Tug Boat Association, formed several years earlier, but the exact connection between the two companies is not now clear. In the late 1870's, the Association operated many or all of its tugs under the American flag, transferring them to the British flag in 1883. For instance, when they acquired the tug *Titan* on 31 January 1878, they placed her under American colors.[647] On 1 October 1887, the Shanghai Tug Boat Association became the Shanghai Tug Boat Co., Ltd. (Morris and Co., agents), their fleet at that time consisting of the tugs *Fairy* (1870), *Fokelin* (1863), *Fuhle* (1870), *Rocket* (1869) and *Samson* (1864). All had been at one time under the American flag with the possible exception of *Fokelin*. The Shanghai Tug Boat Co., Ltd., later became the Shanghai Tug and Lighter Co., Ltd. (Wheelock and Co., agents), under which name it operated for many years. *Samson*, as mentioned under Frazar and Co., was broken up in 1889. *Fairy* had originally been British, Gibb, Livingston and Co. being her agents as of 1873. Her British registry was closed on 7 February 1878 and it is probably about this time that she be-

643 *BSL*, 11 January 1865; *CRS*, Shanghai, Singapore.
644 *NCH*, 23 December 1865. *China Directory* for 1867.
645 *BSL*, 25 November 1865.
646 *NCH*, 8 February 1870; *Shanghai Evening Courier*, 30 July 1873.
647 *CRS*, Shanghai.

in 1859 and ran her trials on 30 October of that year.[654] After undergo-

came American and was acquired by the Shanghai Tug Boat Association. She returned to the British flag on 28 March 1883, with John Morris as registered owner, and was sunk by *Fuhle* near the Kiutoan Lightship on 24 December 1890 while the two tugs were refloating the ship *Forest King*. The crew of *Fairy* was saved, but salvage attempts failed and she was abandoned on 29 June 1891. *Fokelin* and *Fuhle* were sold to Chinese and *Rocket* to Japanese, their British registers being closed on 15 October 1935, 3 December 1936 and 11 August 1938 respectively.

The wooden screw tug *General Ward*, 70 tons, was built by G. and T. Boole at East Boston in 1863. In her first register, dated 30 January 1864, her owners are given as Eben Bacon, William B. Bacon and David S. Fuller, all of West Roxbury, and Daniel G. Bacon of New York, each owning 6/24. Fuller was her captain and took her out to China under sail, reaching Singapore on 8 June 1864, whence she left for Shanghai on the tenth. After her arrival she was fitted up as a steamer and under Captain Fuller was stationed at Shanghai, with Angel and Co. as agents.[648] On the morning of 21 October 1864, while she was towing the bark *Tasso*, *General Ward*'s boiler exploded near the Shanghai S. N. Co.'s wharf, killing all on board with the exception of one Chinese, who was seriously injured.[649] The steamer sank at once. She was later raised and offered for sale,[650] but apparently did not return to service, at least under her original name. At the subsequent inquiry at the United States consulate, it was stated that the boiler was new and strong, but the steam gauge was out of repair, the glass of the water gauge broken, and the safety valve not in order. The engineer was incompetent and the master was responsible for employing him.

The iron screw tug *Maggie Lauder*, 130 tons, built at Liverpool in 1863, is listed as British, with Mackenzie and Co. as agents in 1870.[651] A couple of years later she was flying the American flag, as transactions involving her were recorded at the United States consulate general at Shanghai on 22 March 1872.[652] In November 1874, *Maggie Lauder*, by now Japanese, was chartered by the directors of the Takashima Colliery for towing purposes while *Emperor* was being repaired.[653] This is about all the information we have on her at present.

The small steamer *Meelee* or *Good Profit* was built near Hong Kong

[648] *NCH*, 20 August 1864. C. H. Angel, a former partner in Wheelock and Co., established his own firm at Shanghai on 29 November 1862. (Adv. in *NCH*, 11 April 1863.)

[649] *NCH*, 22 October 1864.

[650] *BSL*, 28 January 1865.

[651] *NCH*, 8 February 1870.

[652] *HMD 31*, I, 607.

[653] *JWM*, 21 November 1874.

The consular reports also state that Captain G. W. Lake of the firm of

in 1859 and ran her trials on 30 October of that year.[654] After undergoing alterations to her machinery, she was placed on the Macao route, alternately with *Spark,* the following spring.[655] Although her actual owners were Chinese, she flew the American flag. On 30 April 1861, she left Canton in the afternoon and stopped at Whampoa at 5:30, where pirates disguised as passengers appear to have boarded her. Shortly after leaving Whampoa, they seized *Meelee,* killed Captain Ricaby and Purser Coit, and transferred the steamer's cargo to a waiting junk. The Chinese engineers and crew took the steamer back to Canton, where the United States consul took charge of her.[656]

There was a small American steamer called *Louisa* of 80 tons, said to have been built at Shanghai, around there in the years 1862-1864. She operated consigned to F. Pearson and Co. and a Captain Pearson commanded her for a time. In 1862 she was making trips between Shanghai and Hankow and the following year she is described as on no particular line,[657] though she is known to have been in service to Hankow toward the close of the year.[658] The latest reference we have to her is when she arrived at Ningpo from Shanghai on 7 June 1864.

Another small American steamer whose name appears in the shipping reports of this period is *Pet,* 100 tons, S. C. Wood, master, which was trading on the Yangtsze in 1862, consigned to M. P. Freeman. The consular reports from Shanghai state that she was built there in 1861 and that Captain Wood owned her. Nothing further is known of her.

On 22 November 1866, J. W. Allen purchased the tug or small steamer *Novelty,* 31 tons, built at Shanghai in 1864 (or in 1862) and sent her to Nagasaki in January 1867 under Captain T. L. Burr.[658] She appears to have been around Nagasaki until 11 July, when she left for Yokohama, and about this time she was sold to the Prince of Gayshiu for Mexican $15,081.[659] On 31 July 1868, W. M. Robinet purchased her from the Japanese and she returned to the American flag. He renamed her *Ohen Maru,* under which name she was wrecked in a typhoon at Kobe on 6 July 1871 while owned by the China and Japan Trading Co.,[660] of which H. Fogg & Co. were the general agents.

654 *CM Supplement,* 3 November 1859, quoting from *Hong Kong Shipping List,* 31 October 1859.
655 *CM,* 17 May 1860.
656 *OCM,* 1 May 1861.
657 *F. of C.,* 18 February 1863.
658 *CRS,* Shanghai.
659 *Commercial Reports from Her Majesty's Consuls in China, Japan and Siam, 1866-1868* (London, 1868), p. 287.
660 See footnote 483.

The consular reports also state that Captain G. W. Lake of the firm of G. W. Lake and Co. bought the little steamer *Flying Cloud* at Shanghai in July 1868, transferred her to the American flag, and then took her to Nagasaki. She was of 28 tons and had been built at Amoy in 1866-1867. When Osaka was opened as a port of entry on 1 September 1868, *Flying Cloud* was placed in service between there and Kobe (Hiogo).[661] Captain Lake and others sold her to the Japanese at Nagasaki on 12 July 1870.

X. The Yokohama-Shanghai Service of the Pacific Mail

The Pacific Mail Steamship Company established a branch service between Yokohama and Shanghai, calling at Hiogo (Kobe) and Nagasaki, under a supplemental contract with the United States authorities dated 20 March 1867. *Costa Rica* sailed from New York on 1 April 1867 for Hong Kong, Shanghai and Yokohama via the Cape of Good Hope. She reached Singapore on 11 June and Nagasaki on 12 July, leaving the latter port for Yokohama on the fifteenth, thereby inaugurating the Yokohama-Shanghai service.[662] *Costa Rica* was joined late in 1867 by *New York*, which had sailed from New York on 3 August 1867 and arrived at Hong Kong via the Cape of Good Hope on 16 October and at Yokohama on 3 November 1867. *New York* was used at first primarily as a spare steamer and as such made one round trip across the Pacific in 1868. *Oregonian* sailed from San Francisco on 4 August 1869 and arrived at Hong Kong on 5 September and at Shanghai on 20 September, after which she entered the Yokohama-Shanghai service, then comprising these three ships. The service was augmented by the addition of *Golden Age* in April 1870 and of *Ariel* (which had also come to Japan in 1870) in March 1871, which permitted a schedule of four sailings per month,[663] even though *Ariel* operated primarily between Yokohama and Hakodate in northern Japan. To keep up the service, *Arizona* made three round trips between Shanghai and Japanese ports in the late spring and summer of 1871. *Relief*, apparently acquired in the summer of 1872, arrived at Shanghai on her first trip in the Pacific Mail service on 15 August 1872 and continued regularly on that line throughout the fall, while *Ariel* was undergoing

[661] *NCH*, 5 September 1868.

[662] The history of the Yokohama-Shanghai service of the Pacific Mail S.S. Co. is based largely on the consular returns from Shanghai and Nagasaki (those from Yokohama being no longer available), on contemporary newspapers (*NCH* and [from 1873 on] *JHM*), and on J. H. Kemble's paper, 'Side Wheelers Across the Pacific,' American Neptune, II (1942), 5-38, especially p. 18. The latter gives 20 July 1867 as the date of *Costa Rica*'s first arrival at Yokohama. If this is correct, she would appear to have been delayed on her voyage from Nagasaki.

[663] Advertisement of Pacific Mail S.S. Co. dated 14 December 1870. *NCH*, 28 December 1870.

repairs, after which *Relief* operated mainly on the Hakodate line, though she came occasionally to Shanghai. She was an iron screw steamer of 791 tons gross, said to have been built in England in 1870.[664]

Ariel, under Captain Newell, left Yokohama for Hakodate on 26 October 1873 and at 9:10 P.M. on the 27th struck at dead low water on a sunken reef three and a half or four miles N.E. of Toyama. Discipline was perfect. Passengers and crew were landed safely, and the mail bag and the ship's money were saved as well. At daylight, the steamer slipped from the rock and sank in deep water, the head of her mainmast alone being visible. The following December the wreck was sold at auction to the Yokohama Wrecking Co. for $700. The court of inquiry stated that the reef was not charted and in consequence no blame attached to Captain Newell, but they suggested that it would have been more prudent to keep farther from land.[665]

Not long afterward, disaster overtook *Relief* also. She had broken her shaft in November 1873, but it was repaired by Boyd and Co. at Shanghai and the steamer was back in service before the end of the year. Under Captain Corning she left Kobe at 2:20 P.M. on 16 January 1874. On account of heavy weather, she anchored in Whitshed Bay until the morning of the nineteenth, when she again got underway. About seven o'clock that evening, the weather, which had been clear, turned cloudy and very dark, and a little after 8:00 P.M. *Relief* struck heavily on a low point of land projecting some three quarters of a mile from shore, off Do-sima Island, Obree Channel. All efforts to move her were unsuccessful and at 3:00 A.M. upon the tide falling, the ship lay over so badly as to disable the engines completely and all hands were sent ashore. At daybreak, *Golden Age* arrived on the scene and passengers, mails and treasure were sent back to Nagasaki by her. Subsequently, two thirds of the cargo was removed; the remainder, being perishable, was abandoned. The ship herself broke in two and the after end nearly filled with water. The wreck was sold at auction in February to C. Sutton for Mexican $505.[666]

Following the loss of *Relief,* the Pacific Mail chartered *Acantha* from the Union S. N. Co. and she made three round trips on the Yokohama-Shanghai line, one each in March, April and May. On 15 June *Nevada* (ex-*Paou Shun*), which had left San Francisco on 23 May under Captain H. C. Dearborn, arrived at Yokohama and was placed in operation on the Shanghai line. With her sailing from Yokohama on 2 July 1874, the

[664] Statement of Pacific Mail S.S. Co., 1 May 1873. *CRS,* Shanghai, Nagasaki.

[665] See *JWM,* 1 November 1873, 8 November 1873, 15 November 1873, 18 December 1873.

[666] *JWM,* 31 January 1874 and 15 February 1874.

service became a weekly one in each direction and so continued, except under unusual circumstances, until the line was sold to the Japanese.

At the beginning of August 1874 *New York* was sold to the Japanese government for $250,000 for use in connection with the Formosa Expedition, being assigned to the Mitsubishi Mail S.S. Co. and renamed *Tokio Maru*. Shortly afterward, *Nevada* made one round trip to Hong Kong for the Messageries Maritimes, and later in the year *Costa Rica, Nevada* and *Oregonian* each made a round trip to Hong Kong for the Pacific Mail, these voyages being due in part to the stranding of *Alaska* in a typhoon at Hong Kong, 22-23 September 1874. *Alaska* spent nearly three months ashore and the Pacific Mail, being short of vessels, terminated some of its transpacific voyages at Yokohama, steamers from the Shanghai branch being used to forward passengers, mails and cargo to Hong Kong. In addition, the Pacific Mail chartered the American steamer *Luzon* (see under Walsh, Hall and Co.) and the German steamers *Altona* and *Bellona* each for a voyage or two, although only the first and last clearly served on the Yokohama-Shanghai line.[667]

In the meantime the Mitsubishi Mail S.S. Co. had started a service between Yokohama and Shanghai and a rate war developed between them and the Pacific Mail. In October 1875 an agreement was effected whereby the Pacific Mail S.S. Co. was to sell to the Mitsubishi Mail S.S. Co. the Shanghai-Yokohama line of the former, together with the steamers regularly employed on it and the dock properties at Shanghai and way ports.[668] *Costa Rica, Golden Age* and *Oregonian* were sold in December 1875 for $160,000 each, being respectively named *Genkai Maru, Hiroshima Maru* and *Nagoya Maru*.[669] At the same time the management of *Nevada* was transferred to the Mitsubishi Company, but due to her being under a mail contract not yet expired, this ship was not transferred to the Japanese flag until 24 January 1877, whereupon she was renamed *Saikio Maru*. Her purchase price was $200,000.[670]

All five of the former Pacific Mail branch line steamers were on the Mitsubishi fleet as of December 1882.[671] However, the last movement of *Saikio Maru* of which we have record was when she arrived at Yokohama from Shanghai under Captain Vroom on 13 November 1878. After

[667] *Altona* (later *Bassano*) (1872), 1,814 g.t. Broken up, 1900. *Bellona* (ex-*Sylph*; later *Hinode Maru*) (1872), 1,098 g.t. Sunk by collision near Sasebo, 30 June 1906.

[668] *JWM*, 30 October 1875.

[669] According to the Pacific Mail statement these steamers were valued as follows as of 1 May 1873: *New York*, $500,000; *Costa Rica*, $400,000; *Oregonian*, $500,000; *Golden Age*, $300,000.

[670] *JWM*, 27 January 1877.

[671] Reply of the Department of Agriculture and Commerce to the memorial of Iwasaki Yataro. *JWM*, 2 December 1882.

this she was laid up at Yokohama and in the *Japan Weekly Mail* for 16 July 1879 it is stated that *Saikio Maru* was to be overhauled and reboilered, after which she would resume her place in the Shanghai line. But I have found no record of her so doing and it is probable that she was never restored to active service. *Tokio Maru* was trading at least as late as September 1884 and it is likely that she was dismantled not long after, as a new *Tokio Maru* came out in 1885. As of 1888, the old steamer was serving as a temporary naval college at Yetajima, near Kure.[672]

Genkai Maru was trading as late as September 1885, but was apparently withdrawn from service about the end of that year.[673] *Hiroshima Maru* and *Nagoya Maru* were in the Japanese coastal service of the Nippon Yusen Kaisha (which had succeeded the Mitsubishi Co. in 1885) in early 1890, tradng between Yokohama and Yokkaichi, but about the beginning of August 1890 *Hiroshima Maru* was taken to Kanagawa for breaking up. By the beginning of November she was almost completely dismantled and *Nagoya Maru* was alongside her, about to undergo the same process.[674]

[672] I am indebted for this information to Mr. Erik Heyl.

[673] *Genkai Maru* appears in *Lloyd's Register* through 1890/1891, being marked 'Condemned' in that issue.

[674] 'The Last of the Side-Wheelers,' *JWM*, 8 November 1890.

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BY ROBERT GREENHALGH ALBION

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NEALEY, WADSWORTH, Harvest of the Sea, 2 pp. *Down East*, July. An appreciation of Capt. Charles York of South Portland and the fishing schooner 'Lochinvar.'

(PEIRCE, CLOTHIER), Of Whalemen's Lament. *Bulletin, Old Dartmouth Hist. Soc.*, Spring. Excerpts from lugubrious journal of Capt. Clothier Peirce of the whaling bark 'Minnesota.'

POPHAM, HUGH, *Cape of Storms: Trawling off the Coast of Russia*, 208 pp. 21s. London, Hart-Davis. Experiences of Hull trawlers in the White Sea.

Undeveloped Fisheries in the Far East, 3 pp. *Far Eastern Econ. Rev.*, 2 May.

U. S. TARIFF COMMISSION, *Ground fish: Fishing and Filleting: Information on the Domestic Industry, Production, Consumption, Foreign Trade, and Industries in Foreign Countries*, 175 pp., processed. Washington, The Commission.

YARNALL, W. B., Notes on the South Jersey Oyster Fleet, 3 pp. *NRJ*, March-April.

VIa. *Merchant Steam—North America and General*

BONSOR, N. R. P., Red Star of the Western Ocean, 28 pp. *Sea Breezes*, July. Organized as Belgian-flag line in 1873; gradual involvement with American-controlled lines; fleet list indicates constant intricate interplay with other lines.

BOULTER, G. E., Galloping Ghost of the Pacific Coast, 3 pp. *S&S*, Fall. Speedy 'Great Northern,' built by Cramp for Hill in 1915, later, after naval service, on West Coast run as 'H. F. Alexander.' See also Carrothers, XVI, 143, where she is called 'Hotfoot.'

BRAYNARD, F. O., From Rum Runners to Queens. *The Fire Islander*, 24 Aug. 1956. Fire Island's powerboat ferries.

BROWN, R. E., The Last Walking-beam Engine Stops, 1 p. *S&S*, Fall. 'The era of swaying walking beams came to an abrupt end on the night of February 10 of this year when the main crankpin of the San Francisco-Oakland ferry "Eureka" broke. . . . The 67-year old wooden steamer was the last walking-beam sidewheeler in America.' Similar account in *Sea Breezes*, June.

The Connecticut Valley Steamboat Company, 20 pp. *Vermont History*, April. Steam navigation between Hartford and Woodsville. See also Jacobus, XVII, 161.

COVELL, W. K., All Aboard on the Good Ship 'Reminiscence,' 3 pp. *Providence Sunday Journal*, 28 July. Pictures of 18 Narragansett Bay steamers, with brief comments.

(DAVIS, S. C.), *California Gold Rush Merchant: The Journal of Stephen Chapin Davis*, ed. B. B. Richards, 124 pp. $5.00. San Marino, Huntington Library, 1956. Includes accounts of trips by way of the isthmus.

DEGNAN, J. L., JR., The 'Clermont' and the Beginnings of Steam, 5 pp. *USNIP*, Aug.

GREENE, M. T., The Old Home Ship, 2 pp. *S&S*, Fall. The coastal side-wheeler 'Kennebec' on Boston-Bath run 20 years without a mishap.

HAYMAN, S. G., Cribs, Cards and Trailer Vans—Package Freight to Alaska, 6 pp. *S&S*, Fall. Use of containers by Alaska Line since 1953.

LADAGE, JOHN, New Look in Liberty Ships, 3 pp. *S&S*, Fall. New types of engines in 'John Sargent,' 'Thomas Nelson,' and 'Benjamin Chew'; see also Performance Summaries, XVII, 235.

MARTIN, E. W., ed., The Hulbert-Walker Letters—To California via Nicaragua in 1852, 16 pp. *Cal. Hist. Soc. Quar.*, June. Letters of Chicago merchant, who died during Nicaragua transit, and of his nephew who continued on to San Francisco.

MEIRS, W. R., Additional Peninsula & Occidental Notes, 1 p. *SBF*, June. See also C. R. Brown, XVI, 290.

MOORE, W. T., Why Shipping Subsidies?, 3 pp. *Nat. Defense Transp.*, May-June.

NEWELL, G. R., Tugboats are Tough Little Ships, 5 pp. *S&S*, Fall. Tugs of Pacific Northwest, including sinking of raised battleship 'Oklahoma' while being towed from Pearl Harbor for scrapping.

Orange Juice, Anyone?, 1 p. *Via Port of New York*, April. Arrival at New York from Florida of tanker 'Tropicana' with 650,000 gallons of fresh orange juice; the converted C-1 had stainless steel vacuum sealed tanks.

SHAW, ALEX, *Liberty Ships; a Middle Age Review*, 140 pp., processed. $10.00. Bel Air, Md., The Author, 6 N. Main St. Includes index of later names.

TYLER, D. B., Steamboating in Delaware, 10 pp. *Delaware History*, March.

U. S. DEPT. OF COMMERCE, *A Review of Direct and Indirect Types of Maritime Subsidies with Special Reference to Cargo Preference Aid*, 65 pp., processed. 75 cents. Washington, The Dept., 1956.

U. S. MARITIME ADMN., *Dry Cargo Service and Area Report: United States Dry Cargo Shipping Companies by Ships Owned and/or Chartered, Type of Service and Area Operated, as of June 30, 1956*, 7 pp., processed. 10 cents. Washington, Maritime Admn., 1956.

VIb. *Merchant Steam—Other Regions*

BONSOR, N. R. P., see Sect. VIa.

BOULTER, G. E., Aloha Landfall, 1 p. *S&S*, Fall. Little steamers of former Hawaiian inter-island service.

BOXER, *Israeli Shipping and Foreign Trade* (Dept. of Geog., Research Paper No. 48). $3.00. Univ. of Chicago. See also King below.

Hamburg South American Line (II), 28 pp. *Sea Breezes*, May. By the editor. Includes fleet list.

ISHERWOOD, J. H., Union Liner 'Greek' and Sisters, 4 pp. *Sea Breezes*, June. 'Gaul,' 'Greek' and 'Goth' completed in 1893 by Harland & Wolff for South African intermediate service.

——— The 'Sierra Salvada' of 1912, 4 pp. Ibid. Built for North German Lloyd on eve of World War I, interned in Brazil; eventually served under five other names on various services.

KING, S. S., Israel is Rushing Merchant Fleet, *N. Y. Times*, 2 June, 1, 88. Expansion program scheduled for completion in 1963; see also Boxer above.

KNAP, *A Century of Shipping; the History of the Royal Netherlands Steamship Co., 1856-1956*. Amsterdam, The Company, 1956.

LESLIE, K. J., 'Pungo' and 'Pioneer,' 2 pp. *Sea Breezes*, July. Launched in 1914 for Cameroons-Hamburg banana trade, both had interesting experiences in World War I, 'Pungo' as the raider 'Moewe.'

TETLOW, STEPHEN, Uncertain Futures, 4 pp. *Sea Breezes*, June. Monthly commentary on ships in the news includes two-page history of Orient line's 'Otranto,' in service since 1925.

WELLINGS, ROBERT, 'Santiago' Loss Recalled, 2 pp. *Sea Breezes*, June. Wilson Liner, bound from New York to Hull, burned at sea in Nov. 1889; survivors rescued by bark 'A. J. Fuller.'

VII. *Inland Navigation*

ALFORD, A. P., Shipbuilding Days in Old Oswego (I), 7 pp. *Inland Seas*, Summer.

BATES, A. L., An Illustrated Steamboat Glossary, 3 pp. *SBF*, June. 'River terminology is a curious mixture of salt water and the barnyard . . . with a little practical carpentry thrown in for good measure.'

BROOKS, I. S., 'Scrapped at Hamilton.' *SBF*, June. Shipbreaking of Lake vessels at Ontario port; long list of vessels broken up at The Steel Co. of Canada's plant.

BROWN, M. J., The Great Lakes Steamship Co. *Inland Seas*, Summer. Formed in 1911 by merger of six smaller companies; finally terminated in 1957, 'one of the largest independent carriers on the Lakes.'

BURKE, H. N., Weather on the Great Lakes, 4 pp. *Inland Seas*, Summer.

CUMMINGS, H. M., James D. Harris and William B. Foster, Jr., Canal Engineers, 16 pp. *Pennsylvania Hist.*, July.

DURHAM, WILLIAM, Sailors of the Briny Shallows, 2 pp. *Westways* (So. Calif. Auto Club), Aug. 'City of Corinne,' with eight staterooms and a celebrated bar, plied Great Salt Lake in late 1860's and into 1870's, bringing ore and other goods from southern end to Corinne, Utah, where new Union Pacific R.R. crossed Bear River. Fall of lake level and added railroads soon ended Corinne boom.

HEYL, ERIK, The 'City of Buffalo': Last of the Great Lakes 'Palace Steamers,' 7 pp. *Niagara Frontier* (Buffalo Hist. Soc.), Spring.

——— The 'City of Quebec' of the Quebec and Gulf Ports S. S. Co., 8 pp. *Inland Seas*, Summer. Screw steamer, originally on Glasgow-Londonderry run, then blockade runner, U. S. naval vessel, and finally on run from Quebec to Gulf of St. Lawrence until sunk in collision, 1870.

KINGSBURY, F. J., An Ericsson Propeller on the Farmington Canal, 2 pp. *SBF*, June. Developed by Benjamin D. Beecher, before the Ericsson screw came to America; reprinted from *Connecticut Magazine*, Dec. 1902.

LEITCH, ADELAIDE, Ships that Serve a Giant, 2 pp. *S&S*, Fall. Loading at the 'largest single-unit grain elevator in the world'—the Saskatchewan Pool No. 7 at Port Arthur, Ont.

McLarty, V. K., ed., The First Steamboats on the Missouri; Reminiscences of Captain W. D. Hubbell, 9 pp. *Missouri Hist. Rev.*, July.

Mark Twain's Piloting, 4 pp. *Missouri Hist. Soc. Bull.*, July. Anecdote of practical jokes involving young Clemens; reprinted from St. Louis *Republican*, 13 June 1875.

Mayer, H. M., *The Port of Chicago and the St. Lawrence Seaway*, 283 pp. Univ. of Chicago Press. Roseate predictions of future possibilities.

Mills, Hiram, Steamboat Experiences, 7 pp. *Missouri Hist. Soc. Bull.*, July. Excerpts from his 1853 diary, with caustic comments on various river steamer practices.

Petterson, D. R., Great Lakes Traffic: an Aspect of Commercial Geography. *Jour. Geog.*, May.

The Port of Detroit. *Detroiter*, 27 May. Whole issue devoted to port aspects.

Richards, T. G., Green Bay: The Sea of Wisconsin, 5 pp. *Yachting*, May.

White, W. F., Log Salvage on the Columbia River: is Maritime Law Paramount? *Oregon Law Rev.*, Feb.

VIII. *Seaports and Coastal Areas*

Bamberger, Werner, To the Army, Nodex Means New Offshore Delivery Exercise. *N. Y. Times*, 28 April, I, 88. Development of devices for loading cargo in areas lacking harbors and port facilities, including 'skycars' operating on overhead tramway from a DeLong pier.

——— Port Landmarks Teem with Lore. *N. Y. Times*, 28 July, V, 12. 'From Sandy Hook to Hell Gate, the harbor is filled with historic sites.'

Bobbé, Dorothy, Philip Hone's New York, 18 pp. *American Heritage*, Aug. Includes several colored pictures of the port during the second quarter of the 19th century.

Brown, Harrison, *Admirals, Adventurers and Able Seamen*, 31 pp., paper. 75 cents plus 11 cents postage. Hornby Island, B. C., The Author. 'Forgotten stories about places on our British Columbia coast and how they got their names.'

Fay, C. R., *Life and Labour in Newfoundland*, 254 pp. Univ. of Toronto Press.

Goldstein, S., Port of New York Authority. *Jour. Public Law*, Fall 1956; also in *Chicago Bar Record*, March 1957.

Harbron, J. D., Spaniards on the Coast, 5 pp. *The Beaver*, Summer. Spanish naval explorations, mapmaking, and land claims in the British Columbia region between 1774 and 1792.

Henderson, J. W., see Sect. XIV. The author, residing at Maple Hill Road, Gladwyne, Pa., is contemplating the writing of a history of the Port of Philadelphia and would appreciate suggestions.

Hyenaes, T., The Port of Houston. *Norwegian Shipping News*, 25 May. History from 1830 to the present.

Isaac, Erich, Kent Island: Part I, The Period of Settlement, 27 pp. *Maryland Hist. Mag.*, June. In Chesapeake Bay, about seven miles across from Annapolis; settled in 1631 by William Claiborne.

Ivamy, E. R. H., Dock Accidents. *Solicitor*, Aug. 1956.

Jarvis, R. C., ed., *Customs Letter-Books of the Port of Liverpool, 1711-1813*, 192 pp. 35*s*. Manchester Univ. Press for Chetham Soc. Letters written to and from the Board of Commissioners in London; the originals were destroyed in World War II.

Johansen, D. O., & Gates, C. M., *Empire of the Columbia: A History of the Pacific Northwest*. $8.00. New York, Harpers. Ch. 2, Spanish and English; 3-4, Maritime; 7, Nor'westers and Astorians; 25, Harvests from the Sea.

Monroe, H. L., Point Arguello has Lost its Threat, 2 pp. *Westways*, Aug. At the 'Graveyard of the Pacific' near Santa Barbara, where the nine destroyers were wrecked in 1923 (XVII, 164), an automatic beacon and loran station has replaced the old light; Point Conception Light, built in 1855, 12 miles south, is still in use.

The Original Treasure Island, 2 pp. *Mainliner* (United Air Lines), June. Argument that Point Lobo near Monterey was the prototype for Stevenson's 'Treasure Island'; includes five colored photographs with appropriate quotations from that story.

Palmer, H. R., Jr., *Stonington by the Sea*, 2nd ed., 95 pp. $5.00. Stonington, Conn., Palmer Press. Revision of 1913 edition by H. R. Palmer, Sr. Brings story up to date, including the effects of the 1938 and 1954 hurricanes.

Pendleton, Nathaniel, ed. Theodore Thayer, Short Account of the Sea Coast of Georgia in Respect to Agriculture, Ship-building, Navigation, and the Timber Trade, 11 pp. *Georgia Hist. Quar.*, March. 1796 Ms. in New York Hist. Soc. Pendleton went to Savannah after the Revolution and became a federal judge, but left state after becoming involved in Yazoo land grab.

ROSE, MAIZIE, *Block Island Scrapbook*, 345 pp. $4.95. New York, Pageant Press. History and reminiscences.

THIELEN, BENEDICT, Martha's Vineyard, 6 pp. *Holiday*, Aug.

IX. *Shipbuilding and Allied Topics*

ALFORD, A. P., see Sect. VII.

BATES, A. L., The California Cutoff from a to kk, 2 pp. *S&S*, Fall. Description of valve gear in steamboat 'Gordon C. Green.'

BROOKS, I. S., see Sect. VII.

HORNSBY, THOMAS, A Search for Naval Timber. *NRJ*, Sept.-Oct. 1956. Quest on Pacific coast of Panama in 1857.

LAUGHTON, L. G. C., Quarter Deck and Forecastle Bulwarks, 2 pp. *Mariner's Mirror*, Aug. Effects of Navy Board order of 1800.

——— Clove-Board, 3 pp. Ibid. Use of split board in early English warships.

LOVEJOY, C. E., Tradition of One-Man Boat Building Remains Alive in New Jersey. *N. Y. Times*, 9 June, v, 9. Harold L. Seaman, at 79, carrying on building of sea skiffs, started by his great-grandfather, Isaac Seaman, at Sea Bright, N. J., in 1841.

RICHTER, A. H., Building of Aluminum Merchant Ship Forecast. *N. Y. Times*, 14 July, v, 12. 'The maritime history of aluminum dates from 1886.' See also Leveau, XVII, 239.

ROBINSON, R. J., Shipbuilding on the Patapsco; Beginnings; the Glorious Eighteenth Century; Shipbuilding Comes of Age. *Baltimore*, April, ff. The industry in the Baltimore area.

WILKINSON, W. D., The Development of the small Inshore Patrol Boats of the United States Coast Guard, 14 pp. *NRJ*, Sept.-Oct. 1956.

The Wishbone Rig, 32 pp. Great Neck, N. Y., Amateur Yacht Research Soc.

X. *Naval to 1939—North America*

BARTLETT, C. J., British Reaction to the Cuban Insurrections of 1868-1878, 17 pp. *Hispanic Am. Hist. Rev.*, Aug. Includes naval impact of 'Virginius' affair.

BOYKIN, E. C., *Ghost Ship of the Confederacy: The Story of the 'Alabama' and her Captain, Raphael Semmes*, 415 pp. $4.95. New York, Funk & Wagnalls.

(BRADLEY, C. D.), John LaMountain and his Balloon at Fort Monroe, 2 pp. *Tales of Old Fort Monroe*, No. 11, Fort Monroe Casemate Museum, 2914 West Ave., Newport News, Va. 1861 balloon ascensions from naval vessel and tugboat.

CAMPBELL, C. S., JR., *Anglo-American Understanding, 1898-1903*, 396 pp. $5.50. Baltimore, Johns Hopkins Univ. Press.

Commodore William Bainbridge, USN, 2 pp. *USNIP*, June. Brief biographical sketch, plus portrait on cover.

DALY, R. W., *How the 'Merrimac' Won: The Strategic Story of the CSS 'Virginia,'* 211 pp. $4.00. New York: Crowell. Argument that the Confederate ironclad achieved her basic purpose by denying McClellan the use of the James River for his Peninsula Campaign of 1862, and that she was not sufficiently seaworthy to have broken the Union blockade even if the 'Monitor' had not arrived. See also White, XVII, 240, and Greene and Hayes below.

(DUVALL, MARIUS, USN), *A Naval Surgeon in California, 1846-1847*, ed. F. B. Rogers. $10.00. San Francisco, John Howell, 434 Post St.

DUKESHIRE, T. S., USN, The Confederate Midshipmen and the Treasure Train, 5 pp. *USNIP*, June. Students of Confederate Naval Academy guarded government gold and silver as far as Georgia after the fall of Richmond.

FITZHUGH, L. N., Saluria, Fort Espenza, and Military Operations on the Texas Coast, 1861-1864, 33 pp. *Southwest Hist. Quar.*, July.

FORESTER, C. S., Victory at New Orleans, 9 pp. *American Heritage*, Aug. Description and analysis of the British attack in 1815, including brief account of the naval preliminaries.

(GREENE, S. D., USN), An Eyewitness Account: 'I fired the first gun and thus commenced the great battle,' 8 pp. *American Heritage*, June. Detailed account of the 'Monitor's' stormy trip to Hampton Roads and her encounter with the 'Merrimac,' in letter from her young 'exec' to his parents. See also Daly above.

HAYES, J. D., USN, Lee Against the Sea, 9 pp. *Shipmate*, June. Influence of naval considerations in the Peninsula Campaign. See also Daly above.

HUNT, R. C. D., USN, Alexander Hamilton and the Regular Naval Establishment, 2 pp. *USNIP*, July.

JOHNSON, A. M., The USS 'Delaware;' 'The Skeered o' Nothin,' 2 pp. *USNIP*, Aug. The sobriquet was whimsically suggested in Congress as the equivalent of 'Dreadnought.'

KLAY, ANDOR, *Daring Diplomacy: The Case of the First American Ultimatum*, 240 pp. $5.00. Minneapolis, Univ. of Minnesota Press. Action of Cdr. Duncan N. Ingraham of the 'St. Louis' and the American consul at Smyrna in securing release of Martin Kosta from Austrian warship in 1853.

KOKE, R. J., War, Profit, and Privateers along the New Jersey Coast: Letters of 1782 relating to an Obscure Warfront of the American Revolution, 59 pp. *N. Y. Hist. Soc. Quar.*, July.

LAMMONS, F. B., Operation Camel: An Experiment in Animal Transportation in Texas, 1857-1860, *Southwest Hist. Quar.*, July. Includes account of transporting 33 camels from Smyrna to Indianola in naval storeship 'Supply.' See also Fornell, XV, 313.

LYMAN, JOHN, Old Ironsides?, 1 p. *USNIP*, July. Shows that picture in Roscoe & Freeman's *Picture History of the U. S. Navy*, designated as interior of 'Constitution's' hull while being reconstructed in 1857, was really the frame of a steamer built at Wilmington in 1891-1892.

MACLEAN, MALCOLM, The Short Cruise of the CSS 'Atlanta.' *Georgia Hist. Quar.*, June 1956.

MILLIS, WALTER, *Arms and Men: A Study in American Military History*, 382 pp. $5.75. New York, Putnam, 1956. Includes survey of naval policy from the beginning.

MORTON, LOUIS, Origins of Pacific Strategy, 8 pp. *Marine Corps Gazette*, Aug. 'The seeds were planted at the Battle of Manila Bay. It took years for them to grow into what became the foundation of World War II victory and the joint planning body known as the JCS.'

ROBOTTI, F. D., The U. S. Frigate 'Essex,' 31 pp. *NRJ*, Nov.-Dec. 1956 to March-April 1957. Includes several plans.

WILKINSON, W. D., see Sect. IX.

XI. *Naval to 1939—Other Regions*

ALDERSON, D. A., Sir Thomas Sherley's Piratical Expedition to the Aegean and his Imprisonment in Constantinople. *Oriens*, Aug. 1956.

BELUCHE, M. I. A., Privateers of Cartagena, 18 pp. *Louisiana Hist. Quar.*, Jan. 1956.

BONNER-SMITH, DAVID, & LUMBY, E. W. R., eds., *The Second China War, 1856-1860* (Navy Records Soc., vol. 95), 413 pp. 45s to nonmembers. Greenwich, The Society.

BRODIE, C. G., RN, *Forlorn Hope, 1915. The Submarine Passage of the Dardanelles*, 91 pp. 10s 6d. London, Frederic Books, W. J. Bryce.

COWEN, D. L., Notes on Hospital Pharmacy in the Royal Navy in the 18th Century, 8 pp. *Bull. of the American Soc. of Hospital Pharmacy*, Nov.-Dec. 1956.

LESLIE, K. J., see Sect. VIb.

MAINE, RENE, tr. from the French by Rita Eldon & B. W. Robinson, *Trafalgar: Napoleon's Naval Waterloo*, 261 pp. 21s. London, Thames & Hudson. $4.50. New York, Scribners. A study of the reasons for Napoleon's failure to invade England, 1803-1805, rather than of the battle itself; makes an interesting parallel to Fleming's *Operation Sea Lion* (see Sect. XII).

MEAD, H. P., RN, Signaling in English Marine Art, 3 pp. *USNIP*, Aug.

ROBINSON, GREGORY, Captain James Aire, 3 pp. *Mariner's Mirror*, Aug. Discussion of the pilot of HMS 'Gloucester' at the time she was wrecked in 1682 with the future James II aboard. See also XV, 242, and Cowburn, XVI, 225; XVII, 82.

SAXBY, R. C., Lord Keith, 1797-1799, 2 pp. *Mariner's Mirror*, Aug. His pressure for additional title and command status.

SINEY, M. C., *The Allied Blockade of Germany, 1914-1916* (Univ. of Michigan Publications in Hist. & Pol. Sci., vol. 23). Ann Arbor, Univ. of Michigan. A second volume, covering 1917-1919, is in preparation.

SPINNEY, J. D., The 'Albanaise' Affair, 9 pp. *Mariner's Mirror*, Aug. Mutiny on British bomb ketch in western Mediterranean, 23 Nov. 1800; ship carried into Spanish port by mutineers.

STEWART, JAMES, RN, The Evolution of Naval Bases in the British Isles, 9 pp. *USNIP*, July. Goes back to the choice of Portsmouth by Henry VII.

TUCKER, C. S., Naval Cannon, 1650-1850, 3 pp. *NRJ*, Nov.-Dec. 1956.

XII. *World War II*

ANDERSON, BERN, USN, U. S. Navy's Attitude on Convoys, 2 pp. *USNIP*, July. Takes issue with Capt. Roskill's statement that 'the United States naval authorities were not convinced of the value of convoys and preferred to hunt.'

BARKER, RALPH, *The Ship-Busters: The Story of the R. A. F. Torpedo-Bombers*, 272 pp. 16s. London, Chatto & Windus.

BROWNLOWE, L. C., *The Mulberry Project*, 158 pp. 2s. London, Spence. The artificial harbors for the Normandy landings in 1944.

BROU, W-C, tr. from the French by Edward Fitzgerald, *Combat Beneath the Sea: A New Chapter in the History of Warfare*, 240 pp. $3.95. New York, Crowell. Frogmen, human torpedoes, and midget submarines.

BYKOFSKY, JOSEPH, & LARSON, HAROLD, *The Transportation Corps: Operations Overseas* (U. S. Army in World War II, Technical Services), 688 pp. $6.50. Washington, GPO, for Chief of Military History.

FARLEY, E. I., USN, *P. T. Patrol: Wartime Adventures in the Pacific and the Story of the P.T.'s in World War II*, 108 pp. $2.75. New York, Exposition Press.

FLEMING, PETER, *Operation Sea Lion; the Projected Invasion of England in 1940: an Account of the German Preparations and the British Countermeasures*, 323 pp. $5.00. New York, Simon & Schuster. This able and thorough study fills an important gap in the history of World War II.

HERTER, C. A., Proposed Legislation for Payment to Denmark in Connection with Ships Requisitioned in World War II, 6 pp. *U. S. Dept. of State Bull.*, 24 June.

JONES, W. G., 'Laconia' Survivor's Story, 1 p. *Sea Breezes*, June. Torpedoing of Cunarder off West Coast of Africa, 12 Sept. 1942; survivors rescued by French cruiser from Dakar, summoned by U-boat commander.

LORD, WALTER, *Day of Infamy*, 243 pp. $3.95. New York, Holt. Play-by-play story of the Pearl Harbor attack, already noted in *Life* installments, XVII, 166.

Los Angeles' Name Given Many Ships. *Los Angeles Times*, 3 June.

MASLAND, J. W., & RADWAY, L. I., *Soldiers and Scholars: Military Education and National Policy*, 552 pp. $7.50. Princeton. Includes analyses of the National War College, Naval War College, and Naval Academy, as well as Joint Chiefs of Staff, National Security Council, etc.

MEISTER, JUNG, The Soviet Navy in World War II, 7 pp. *USNIP*, Aug. Based on 25 photographs of Russian warships, chiefly in damaged condition.

MORISON, S. E., *The Invasion of France and Germany: 1944-1945* (History of United States Naval Operations in World War II, vol. XI), 360 pp. $6.50. Boston, Little, Brown. Again, Rear Admiral Bern Anderson was his principal collaborator.

MORTON, LOUIS, see Sect. X.

OLSEN, R. I., USN, & PORTER, DAVID, USNR, *Torpedoes Away!*, 247 pp. $3.00. New York, Dodd, Mead. Fictional submarine account.

ROSKILL, S. W., RN, Naval Operations in the Red Sea, 1940-1941, 5 pp. *Jour. of the Royal United Service Inst.*, May.

Saga of the 'Wakefield.' *U. S. Coast Guard Mag.*, June. Former liner 'Manhattan,' serving as naval transport.

SAVAGE, C. I., *Inland Transport* (History of the Second World War, Civil Series), 678 pp. 47s 6d. HMSO & Longmans. Includes British coastal shipping and use of canals.

Savo Island—Who Hit 'Chokai's' Chart Room?, 1 p. *Shipmate*, Aug. Question of which American cruiser, before going down, wrecked the Japanese flagship's operations and chart room.

SCHAEFFER, HEINZ, *U-Boat 977*, 160 pp., paper. 35 cents. New York, Ballantine. Already noted in 1952 hard-cover edition, XIII, 150.

SERRELL, ANDREW, USN, Mars, No Bettah da Kine, 6 pp. *USNIP*, Aug. The Martin Mars (PB2M), the 'most majestic, efficient, and reliable seaplane transport craft that ever became airborne.' The title is Hawaiian pidjin, implying perfection.

THOMPSON, R. W., *At Whatever Cost: The Story of the Dieppe Raid*, 215 pp. $3.50 New York, Coward-McCann.

TURNER, J. F., *Periscope Patrol*, 224 pp. 15s. London, Harrap.

——— *V.C's of the Royal Navy*. 9s 6d. London, Harrap. Brief accounts of what each World War II recipient did to rate this highest honor.

WEHRMEISTER, R. L., USN, Divine Wind over Okinawa, 9 pp. *USNIP*, June. Account of kamikaze attacks on the United States naval forces, including statistical data; written as term paper at Annapolis.

WILLOUGHBY, M. F., *The U. S. Coast Guard in World War II*, 348 pp. $6.00 ($3.60 to members). Annapolis, U. S. Naval Institute. An excerpt, on the mounted patrols, appeared in *USNIP*, Aug., under title 'The Beach Pounders.'

WILSON, B. T., Reflections on Operation 'See Loewe,' 11 pp. *Army Quarterly*, July. Observations by a British major general; see also Fleming above.

XIII. *Postwar Naval*

CAGLE, M. W., USN, & MANSON, F. A., USN, *The Sea War in Korea*, 560 pp. $6.00 ($3.60 to members). Annapolis, U. S. Naval Institute. Excerpts appeared in *USNIP*, June and July, as 'Wonsan: The Battle of the Mines,' and 'Post Interdiction Carrier Operations in Korea,' respectively.

CLUBB, O. E., Suez and the Indian Ocean, 6 pp. *USNIP*, Aug.

COLETTA, P. E., U. S. Naval Training Center—Bainbridge, 17 pp. *USNIP*, June. Pictorial article.

CURLEY, C. E., Correction of Naval Records. *JAG Jour.*, Dec. 1956.

FIORE, L. R., MSTS—The Navy's Fourth Arm, 22 pp. *USNIP*, Aug. The Military Sea Transportation Service; includes six pages of pictures.

HITTLE, J. D., USMC, Military Planning at the Seat of Government, 10 pp. *USNIP*, July. Lucid analysis of the various elements and stages involved.

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A QUARTERLY JOURNAL OF MARITIME HISTORY

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